

Shore Protection Manager

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**CARTERET COUNTY BEACH COMMISSION MEETING
FEBRUARY 18, 2019; 2:00 pm
PINE KNOLL SHORES TOWN HALL**

AGENDA

(1)	Call to Order.	<i>Chairman Cooper</i>
(2)	Approval of Minutes. (Regular Beach Commission Meeting – December 3, 2018)	<i>Chairman Cooper</i>
(3)	2019 Beach Commission Officer Elections. (chair & vice-chair)	<i>Chairman Cooper</i>
(4)	Room Occupancy Tax (ROT) and “Beach Fund” Update.	<i>Greg “rudi” Rudolph</i>
(5)	Shore Protection Office Budget for FY 2019–20.	<i>Greg “rudi” Rudolph</i>
(6)	Public Comment.	
(7)	Other Business.	
(8)	March 2019 Meeting Date. (March 25, 2019 – proposed)	<i>Chairman Cooper</i>
(9)	Adjourn.	<i>Chairman Cooper</i>

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CARTERET COUNTY BEACH COMMISSION

Agenda Topic Cover Sheet

Approval of Minutes

Regular Beach Commission Meeting – December 3, 2018

Meeting Date: 2/18/19

Topic No. 2

Suggested Action: A motion should be entertained to approve the December 3, 2018 meeting minutes with any recommended changes from the Beach Commission.

Attached for the Beach Commission's review, comments, and subsequent approval are the minutes for the Commission's December 3, 2018 regular meeting.

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CARTERET COUNTY BEACH COMMISSION MEETING

Minutes
Pine Knoll Shores Town Hall
December 3, 2018, 2 pm

Attendance.

Commission Members A.B. "Trace" Cooper (chair), Ken Jones (vice-chair), Harry Archer, Larry Baldwin, Douglas Guthrie, Joel Fortune, Jim Normile, John Wooten, secretary Greg Rudolph, and the general public. Member Larry Corsello and Jimmy Farrington was absent.

- (1) **Call to Order.** - Chairman Cooper welcomed everyone and called the meeting to order.
- (2) **Approval of Minutes - Regular Beach Commission Meeting (October 22, 2018).** – Chairman Cooper asked the Commission if there were any corrections, additions, or comments regarding the October 22nd regular session minutes presented in the agenda packet. Member Archer subsequently made a motion to adopt the minutes as presented, which was seconded by member Baldwin and unanimously approved.
- (3) **Room Occupancy Tax (ROT) and "Beach Fund" Update.** – Chairman Cooper introduced the topic by noting we thought the September occupancy tax report would bring us some bad news in light of hurricane *Florence's* impact to visitation, but we actually experienced an increase in collections compared to last September (2017). This is more of reporting glitch the Chairman continued, which the secretary subsequently explained by noting that although the September collection was up by over +10%; it is clearly an artifact of the August receipts not being submitted to the County to well after *Florence*. The Commission may remember the occupancy tax collection was down ever so slightly in August (-0.40%), but with this reporting issue in mind; it appears that in reality August was likely up substantially and September therefore would have been down in commensurate fashion. To this end, the County's Tourism Development Authority (TDA) has requested the County's Finance Department to re-visit the August and September receipts and possibly re-issue new collection reports that better represents when the collection occurred. However as the secretary continued, the occupancy tax remains in positive territory for the calendar year (+3.2%) regardless of which month the collections occurred, which is good news. Of course in all likelihood October, November, and possibly December could be down because of *Florence* impacting rentals and businesses.

The Secretary also mentioned other quirks to consider moving forward as well – (1) the occupancy rate is full for the hotel/motels that are still open (i.e., not damaged by *Florence*) because of all the contractors in Town and displaced families. However this surge is offset because (2), any long term rentals that are currently taking place as families wait for home repairs

are not subject to the occupancy tax. This paints a very odd collection picture moving forward that we will monitor closely.

- (4) **Nomination Committee Appointments and Upcoming Beach Commission Vacancies.** – Chairman Cooper summarized the Beach Commission do not appoint their own members, but we provide nominations to the County Board for their consideration. And also per our by-laws, we are trusted to select a nomination committee to screen candidates but for well over a decade we have appointed the entire beach Commission as the “nomination committee” and will do so today as well. To these effects, we have four upcoming vacancies (Archer, Normile, Guthrie, and an unoccupied TDA slot) and there are no term limits in the Beach Commission’s by-laws. Therefore assuming these members wish to continue, the Beach Commission will request the County Board to re-appoint all of these individuals. The chairman also addressed the TDA vacancy by noting that Woody Warren has been recently appointed back on to the TDA and of course served on the Beach Commission in this capacity in the past as well. Hopefully Mr. Warren would be willing to serve on the Beach Commission again. Vice chairman Jones subsequently made a motion that the Beach Commission forward a letter to the County Board recommending that H. Archer, J. Normile, and D. Guthrie be re-appointed to the Beach Commission. The motion on the floor was seconded by member Fortune and unanimously approved. Chairman Cooper concluded that he will also outreach with the TDA and Woody Warren to see if there is mutual interest. Jim Browder (audience and TDA executive director) disclosed that he would be happy to shepherd Mr. Warren’s nomination along. Mr. Browder also mentioned that it appears the occupancy tax for month of August was up by +9% and September was down by -12% or -15% based on a preliminary review by the County (see “(3)” above). Also a lot of tourists had vacation insurance so even though they may have never physically visited Bogue Banks because of hurricane *Florence*’s impacts, the insurance also paid occupancy tax so there was still a collection.

Chairman Cooper also noted we (Beach Commission) select a Chair and Vice-Chair annually, and will do so for 2019 at the scheduled February 11th meeting. It’s been almost five years since I (Cooper) and member Jones have served in these roles, respectively; and if it is the Commission’s wish, then we will gladly serve another term but the Commission should be thinking about a succession plan going forward.

- (5) **Inlet Hazard Area Delineation & Policy Update – Bogue Inlet.** – Secretary Rudolph introduced the subject by noting this is a very “N.C. Division of Coastal Management (NCD CM)” centric topic, and to that end; the secretary introduced Ken Richardson from the audience (NCD CM Shoreline Management Specialist). As a brief introduction along with initiating a [Powerpoint Presentation](#), the secretary explained that ***Inlet Hazard Areas*** are one of three Oceanfront Hazard Areas of Environmental Concern, and is designated as such because quite simply shorelines near inlets behave differently than those along the open oceanfront. The Coastal Resources Commission first adopted “the boxes” (the geographic area of inlet influence) in 1979, and subsequently codified development rules for what can occur “inside the box” in 1981. There has been almost no update to the box nor the rules since, and the State’s Science Panel has been tasked to re-evaluate the geographic boundaries of the box at 10 inlets – no inlets bordering State or federal lands were addressed.

The secretary continued by reviewing the methodology the Science Panel used (note: the secretary is a member of the Science Panel). The shore parallel boundary of Inlet Hazard Areas

was determined by analyzing shoreline change rates and determining the standard deviation of the dataset per profile for each side of the inlet. The shore perpendicular boundary was established utilizing a hybrid-vegetation line and a 90-year risk line (see [slides 5-14](#)). Once these concepts were introduced, the same methodology was applied for Bogue Inlet and graphically displayed ([slides 15-19](#)). In terms of policy, the CRC will be revisiting this aspect of IHAs as well but it appears all existing structures will be grandfathered regardless of the boundary changes themselves, and considering the Point is pretty much “built out” - this should not be a problem. However, we will work with Emerald Isle in any capacity they would like. Both member Baldwin and chairman Cooper discussed the differences between oscillating and migrating inlets that the Science Panel also categorized from a general sense. The secretary subsequently used Google Earth Engine to demonstrate the differences in these two types of inlets.

- (6) **Public Comment.** – No additional public comment.
- (7) **Other Business.** – None.
- (8) **January/February 2019 Meeting Date** (February 11, 2019 – proposed). – The Commission agreed to combine the January and February 2019 regular meetings as necessitated to consider and approve the FY 2019-20 budget in accordance with the County’s timetable; and therefore scheduled the next meeting for February 11th, 2 pm, Pine Knoll Shores Town Hall.
- (9) **Adjourn.** – Chairman Cooper asked for any additional comments and with no additional comments forthcoming, the meeting was adjourned.



CARTERET COUNTY BEACH COMMISSION

Agenda Topic Cover Sheet

2019 Beach Commission Officer Elections (chair and vice-chair)

Meeting Date: **2/18/19**

Topic No. **3**

Suggested Action: In accordance with the Beach Commission's by-laws, the Commission should proceed to nominate and elect a chair and vice-chair for this year (2019) by simple majority at our February regular meeting.

Pursuant to Article IV, Sec. 2 of the Carteret County Beach Commission bylaws, nominations and elections of the chair and vice-chair of the Commission shall take place at the regular Beach Commission meeting in January of each year. January is also designated as the "begin and end" date for the terms of Beach Commission members, and recently members Archer, Normile, Guthrie, and Warren were either re-appointed or appointed to the Beach Commission by the County Board of Commissioners on January 14, 2019. Obviously our January meeting was postponed until February and hence our officer elections will need to take place during our February 18th meeting. A complete and updated roster of the Beach Commission, copies of the meeting agendas and minutes, and the Commission's by-laws are available at <http://www.carteretcountync.gov/298/Beach-Commission>. The Commission's current roster is also provided on the following page.

For the elections this month, any Commission member is permitted to make a nomination and officers are elected for a one-year term via simple majority by those members present at our February regular meeting (verbal or written ballot). Also there are no limits for consecutive terms, thus members Cooper and Jones are eligible to serve once again in the chair and vice-chair capacity, respectively if they and the Beach Commission so desires.

And lastly, I have genuinely enjoyed working with the Beach Commission over the course of this past and predating years – we've had the same core of individuals now for a while and it would be hard pressed to find a more technically savvy, fiduciary responsible, and thoughtful board/commission/council in local government. The institutional knowledge we all possess is helping us achieve some long term goals that came to fruition in 2018 as detailed in the accompanying budget materials (see agenda topic 5 – program summary) and is highlighted by; (a) securing all State and federal permits/authorizations after several years of work associated with the Bogue Banks Master Nourishment Plan, (b) utilizing the

Master Plan permitting/authorization authority as a vehicle to quickly respond to hurricane *Florence* by implementing a nourishment project, (c) serving as an informational clearinghouse and "honest-broker" with respect to the new modified 2019 – 2024 Outer Continental Shelf Oil & Gas Leasing Program and associated seismic Geophysical and Geological (G&G) permitting, (d) securing State funding to bring the Pre-Construction, Engineering & Design Phase of the U.S. Army Corps of Engineers' "50-year" Coastal Storm Damage Reduction Project towards a conclusion, and (e) serving as a grant administer and project manager for various waterway projects throughout the County.

I also look forward to working collectively with the Beach Commission as we address the challenges before us in 2019, which will mostly focus upon *Florence* recovery for the beaches of central and west Emerald Isle, Pine Knoll Shores, and west Atlantic Beach. This will potentially entail a host of FEMA reimbursement issues pertaining to the level of reimbursement and consequent cash flow concerns.

CARTERET COUNTY BEACH COMMISSION			
NAME	RESIDING/ REPRESENTING	TERM LENGTH	TERM EXPIRES
Harry Archer	Atlantic Beach	3 years	1/2022
A.B. "Trace" Cooper, III	Atlantic Beach	3 years	1/2021
Ken Jones	Pine Knoll Shores	3 years	1/2020
Larry Corsello	Pine Knoll Shores	3 years	1/2021
Jim Normile	Emerald Isle	3 years	1/2022
John Wootten	Emerald Isle	3 years	1/2020
Joel Fortune, Jr.	Indian Beach	3 years	1/2021
Douglas Guthrie	Bogue Banks	3 years	1/2022
Larry Baldwin	County At-Large	3 years	1/2020
Jimmy Farrington	Board of Commissioners	3 years	1/2021
Woody Warren	TDA	3 years	1/2022



CARTERET COUNTY BEACH COMMISSION

Agenda Topic Cover Sheet

Room Occupancy Tax (ROT) and “Beach Fund” Update.

Meeting Date: **2/18/19**

Topic No. **4**

Suggested Action: None.

Copies of Carteret County’s monthly Room Occupancy Tax (ROT) collection reports for the previous quarter (October, November, and December 2018) are attached to this month’s “Beach Fund” update. These data are utilized to update four summary tables presented at the end of this coversheet including; **Table 1** - a running summary of ROT collections comparing monthly revenues from FY 2018-19 to FY 2017-18, **Table 2** - a summary of ROT revenue from a Calendar Year perspective (CY 2018 - CY 2012), **Table 3** - a more detailed FY 2018-19 to FY 2017-18 revenue comparison of the collection by sectors (hotel/motel, condo/cottage, and “other”), and **Table 4** - a year-to-date estimate of the Beach Fund. Also the receipt of these monthly collections signify the conclusion of the calendar year, which is discussed at length later in this month’s agenda (Topic No. 5) where our revenue portion of the proposed FY 2019-20 budget is detailed.

The October, November, and December collections were -28.2%, +46.3%, and +54.8, respectively compared to the same months in 2017. As a collective group, this equates to a +7.0% monetary increase (+\$27,182 to the Beach Fund) over the course of these three months. Obviously hurricane *Florence* is complicating this reporting pattern – there is lower inventory as whole, but occupation during these shoulder and winter months is up because of construction workers in the area and displaced families. Moreover, the month of October was in deep negative territory but this could be a reporting artifact from September, which was up by over +10% compared to the previous September despite *Florence*’s passage. Regardless of *Florence*’s impacts, the occupancy tax as a whole is up by just under +1% halfway through the 2018-19 fiscal year.

And lastly as illustrated in Table 4 below, our estimated value for the beach nourishment reserve (“Beach Fund”) is approximately \$20.8 million by taking our opening balance, our expenditures to date, and revenue all current through December 2018 into account. A copy of the expenditure report for the month of December is also attached to this cover sheet for the Commission’s review, and it should be kept in mind the Post-*Florence* Renourishment Project scheduled for this March and April could ultimately reduce the reserve value by a maximum of \$12 million.

**Cumulative Analysis and Monthly Comparison
Room Occupancy Tax (ROT) and the "Beach Fund"
FY 2018-19 v. 2017-18
Carteret County**

Month	Gross Receipts TDA & Beach		Beach Fund (Monthly)*		Beach Fund (YTD)*		Occ. Tax Total Monthly Difference	Occ. Tax Total YTD Difference
	FY 17-18	FY 18-19	FY 17-18	FY 18-19	FY 17-18	FY 18-19		
Jul	\$2,022,661	\$1,951,256	\$1,011,331	\$975,628	\$1,011,331	\$975,628	-3.53%	-3.53%
Aug	\$1,345,057	\$1,339,735	\$672,528	\$669,867	\$1,683,859	\$1,645,495	-0.40%	-2.28%
Sep	\$651,908	\$720,343	\$325,954	\$360,172	\$2,009,813	\$2,005,667	10.50%	-0.21%
Oct	\$424,176	\$304,571	\$212,088	\$152,286	\$2,221,901	\$2,157,953	-28.20%	-2.88%
Nov	\$260,361	\$380,894	\$130,181	\$190,447	\$2,352,081	\$2,348,400	46.29%	-0.16%
Dec	\$97,436	\$150,872	\$48,718	\$75,436	\$2,400,800	\$2,423,836	54.84%	0.96%
Jan	\$108,736		\$54,368		\$2,455,168			
Feb	\$147,363		\$73,682		\$2,528,849			
Mar	\$194,638		\$97,319		\$2,626,168			
Apr	\$426,106		\$213,053		\$2,839,221			
May	\$314,986		\$157,493		\$2,996,714			
Jun	\$1,582,294		\$791,147		\$3,787,861			
Totals=	\$7,575,723	\$4,847,672	\$3,787,861	\$2,423,836	\$3,787,861	\$2,423,836	Avg. = 13.25%	0.96%

Note: 6% overall collection rate (* = 50 TDA/50 Beach Fund split).

TABLE 1 – Monthly and cumulative summary of the Carteret County room occupancy tax collection reflecting the current and previous fiscal year in terms of the gross revenue and the portion of revenue legislatively mandated for beach nourishment (i.e., the "Beach Fund").

**Cumulative Analysis and Monthly Comparison
Room Occupancy Tax (ROT) and the "Beach Fund"
Calendar Year 2018 - 2012
Carteret County (6% collection rate)**

Month	2018 6%	2017 6%	2016 6%	2015 6%	2014 6%	2013		2012	
						6%	5%	6%	5%
Jan.	\$108,736	\$90,369	\$72,738	\$65,107	\$54,359	\$48,955	\$40,796	\$50,517	\$42,097
Feb.	\$147,363	\$102,895	\$80,744	\$66,976	\$60,118	\$52,897	\$44,081	\$62,634	\$52,195
Mar.	\$194,638	\$198,697	\$197,020	\$142,289	\$121,346	\$128,088	\$106,740	\$114,521	\$95,434
Apr.	\$426,106	\$378,586	\$267,064	\$238,039	\$218,570	\$187,767	\$156,472	\$226,302	\$188,585
May	\$314,986	\$574,112	\$495,403	\$519,427	\$530,041	\$373,921	\$311,601	\$368,024	\$306,687
June	\$1,582,294	\$1,211,103	\$1,254,762	\$1,194,984	\$1,119,788	\$1,126,150	\$938,458	\$1,041,735	\$868,113
July	\$1,951,256	\$2,022,661	\$1,945,706	\$1,799,562	\$1,714,309	\$1,440,439	\$1,200,365	\$1,436,356	\$1,196,963
Aug.	\$1,339,735	\$1,345,057	\$1,310,899	\$1,310,391	\$1,327,500	\$1,270,274	\$1,058,562	\$1,140,977	\$950,814
Sept.	\$720,343	\$651,908	\$632,513	\$598,281	\$514,648	\$471,580	\$392,983	\$437,265	\$364,387
Oct.	\$304,571	\$424,176	\$354,178	\$357,967	\$348,348	\$296,997	\$247,497	\$219,665	\$183,054
Nov.	\$380,894	\$260,361	\$192,591	\$148,172	\$125,217	\$145,665	\$121,388	\$120,973	\$100,811
Dec.	\$150,872	\$97,436	\$98,029	\$89,584	\$92,698	\$72,597	\$60,498	\$51,216	\$42,680
Totals =	\$7,621,795	\$7,357,361	\$6,901,648	\$6,530,780	\$6,226,944	\$5,615,329	\$4,679,441	\$5,270,185	\$4,391,821
(+/-) previous year	3.59%	6.60%	5.68%	4.88%	10.89%	6.55%		-1.39%	

TABLE 2 – Monthly and cumulative summary of the Carteret County Room Occupancy Tax collection reflecting the current and previous six calendar years in terms of the gross revenue only.

HOTELS/MOTELS

3

Month	2017-18		2018-19		FY 2018-19 v. 2017-18	
	Monthly	Year-to-Date	Monthly	Year-to-Date	Monthly	Year-to-Date
Jul	\$370,322	\$370,322	\$365,114	\$365,114	-\$5,208	-1.41%
Aug	\$274,246	\$644,568	\$217,643	\$582,757	-\$56,603	-9.59%
Sep	\$177,382	\$821,950	\$236,742	\$819,499	\$59,360	-0.30%
Oct	\$194,831	\$1,016,781	\$147,923	\$967,422	-\$46,909	-4.85%
Nov	\$94,295	\$1,111,076	\$129,778	\$1,097,200	\$35,483	-1.25%
Dec	\$57,487	\$1,168,563	\$92,243	\$1,189,443	\$34,757	1.79%
Jan	\$64,220	\$1,232,782				
Feb	\$75,355	\$1,308,137				
Mar	\$117,220	\$1,425,358				
Apr	\$171,013	\$1,596,371				
May	\$164,845	\$1,761,215				
Jun	\$410,906	\$2,172,122				
Totals=	\$2,172,122	\$2,172,122	\$1,189,443	\$1,189,443	\$20,880	1.79%

CONDOS/COTTAGES

Month	2017-18		2018-19		FY 2018-19 v. 2017-18	
	Monthly	Year-to-Date	Monthly	Year-to-Date	Monthly	Year-to-Date
Jul	\$1,536,111	\$1,536,111	\$1,462,838	\$1,462,838	-\$73,273	-4.77%
Aug	\$986,966	\$2,523,077	\$1,046,472	\$2,509,310	\$59,506	-0.55%
Sep	\$432,336	\$2,955,413	\$446,022	\$2,955,332	\$13,686	0.00%
Oct	\$198,533	\$3,153,946	\$118,172	\$3,073,504	-\$80,361	-2.55%
Nov	\$91,458	\$3,245,403	\$225,997	\$3,299,501	\$134,539	1.67%
Dec	\$28,719	\$3,274,123	\$38,797	\$3,338,298	\$10,077	1.96%
Jan	\$15,587	\$3,289,710				
Feb	\$41,210	\$3,330,920				
Mar	\$34,772	\$3,365,692				
Apr	\$207,589	\$3,573,281				
May	\$115,838	\$3,689,120				
Jun	\$1,039,338	\$4,728,457				
Totals=	\$4,728,457	\$4,728,457	\$3,338,298	\$3,338,298	\$64,175	1.96%

OTHER, LESS THAN 5, & ON-LINE TOTAL

Month	2017-18		2018-19		FY 2018-19 v. 2017-18	
	Monthly	Year-to-Date	Monthly	Year-to-Date	Monthly	Year-to-Date
Jul	\$116,227	\$116,227	\$123,303	\$123,303	\$7,076	6.09%
Aug	\$83,846	\$200,073	\$75,620	\$198,923	-\$8,225	-0.57%
Sep	\$42,191	\$242,263	\$37,579	\$236,503	-\$4,611	-2.38%
Oct	\$30,811	\$273,075	\$38,477	\$274,980	\$7,665	0.70%
Nov	\$74,609	\$347,683	\$25,120	\$300,099	-\$49,489	-13.69%
Dec	\$11,230	\$358,914	\$19,832	\$319,931	\$8,602	-10.86%
Jan	\$28,929	\$387,843				
Feb	\$30,799	\$418,641				
Mar	\$42,645	\$461,286				
Apr	\$47,504	\$508,790				
May	\$34,303	\$543,093				
Jun	\$132,051	\$675,144				
Totals=	\$675,144	\$675,144	\$319,931	\$319,931	-\$38,983	-10.86%

TABLE 3 – Monthly and cumulative summary of the Carteret County occupancy tax collection segregated by each of the three collection sectors (hotel/motel, condo/cottage, and “other”) for the current and previous fiscal years in terms of the gross revenue only. Note: On-line collection was first implemented in January 2016.

**Estimated Year-to-Date "Beach Fund" Reserve Balance
FY 2018-19**

Opening Fund Balance (7/1/18)	\$18,631,010
Revenues	
Occupancy Tax (to date)	\$2,423,836
Interest on Reserve	NA
<i>Total Revenues</i>	<u>\$2,423,836</u>
Expenditures	
Shore Protection Office (12/31/18)	\$222,079
County Occupancy Tax Administration Fee*	\$29,238
<i>Total Expenditures</i>	<u>\$251,317</u>
 (Deficit)/Surplus for Year	 <u>\$2,172,518</u>
 Fund Balance	 <u><u>\$20,803,528</u></u>

*Up to 3% of first \$500,000 of gross proceeds and 1% of remaining gross receipts collected each year.

TABLE 4 – Estimated value of the “Beach Fund” utilizing the opening fund balance at the beginning of the current fiscal year, coupled with the revenues and expenditures to date.

OCCUPANCY TAX COLLECTION**Reporting period:****Oct-18**

Type	Tax Received	Penalties & Interest	Total Reporting Tax	Total No Tax
CONDOS/COTTAGE	\$ 117,812.97	\$ 359.05	54	62
HOTEL / MOTEL	\$ 147,835.43	\$ 87.21	25	11
OTHER	\$ 16,492.84	\$ 501.71	55	133
ONLINE	\$ 21,482.15	\$ -	4	2
TOAL ALL TYPES	\$ 303,623.39	\$ 947.97	138	208
Total Collected	\$ 304,571.36			

October-18

Reporting Location	Condos/Cottage Tax	Hotel/Motel Tax	Other Tax	On Line	Total
Atlantic Beach	\$31,886.86	\$19,008.55	\$3,261.90	\$0.00	\$54,157.31
Beaufort	\$2,144.80	\$18,112.85	\$3,000.65	\$0.00	\$23,258.30
Cape Carteret	\$206.01	\$17,232.54	\$424.32	\$0.00	\$17,862.87
Emerald Isle	\$78,692.64	\$25,356.80	\$6,582.35	\$0.00	\$110,631.79
PKS / Salter Path/ Indian Beach	\$1,662.81	\$32,984.93	\$403.12	\$0.00	\$35,050.86
Morehead City	\$0.00	\$25,426.92	\$14.40	\$0.00	\$25,441.32
On Line	\$0.00	\$0.00	\$0.00	\$21,482.15	\$21,482.15
Unincorporated	\$3,578.90	\$9,800.05	\$3,307.81		\$16,686.76
Totals	\$118,172.02	\$147,922.64	\$16,994.55	\$21,482.15	\$304,571.36

OCCUPANCY TAX COLLECTION**Reporting period:****Nov-18**

Type	Tax Received	Penalties & Interest	Total Reporting Tax	Total No Tax
CONDOS/COTTAGE	\$ 225,975.49	\$ 21.24	40	76
HOTEL / MOTEL	\$ 127,190.19	\$ 2,587.85	24	12
OTHER	\$ 11,746.61	\$ 57.34	49	139
ONLINE	\$ 13,315.58	\$ -	4	2
TOTAL ALL TYPES	\$ 378,227.87	\$ 2,666.43	117	229
Total Collected	\$ 380,894.30			

November-18

Reporting Location	Condos/Cottage Tax	Hotel/Motel Tax	Other Tax	On Line	Total
Atlantic Beach	\$18,278.82	\$19,424.07	\$2,514.51	\$0.00	\$40,217.40
Beaufort	\$1,312.52	\$11,810.97	\$1,312.27	\$0.00	\$14,435.76
Cape Carteret	\$249.07	\$15,093.46	\$0.00	\$0.00	\$15,342.53
Emerald Isle	\$203,501.01	\$18,906.52	\$5,443.41	\$0.00	\$227,850.94
PKS / Salter Path/ Indian Beach	\$361.88	\$26,994.05	\$0.00	\$0.00	\$27,355.93
Morehead City	\$0.00	\$29,687.20	\$0.00	\$0.00	\$29,687.20
On Line	\$0.00	\$0.00	\$0.00	\$13,315.58	\$13,315.58
Unincorporated	\$2,293.43	\$7,861.77	\$2,533.76	\$0.00	\$12,688.96
Totals	\$225,996.73	\$129,778.04	\$11,803.95	\$13,315.58	\$380,894.30

OCCUPANCY TAX COLLECTION**Reporting period:****Dec-18**

Type	Tax Received	Penalties & Interest	Total Reporting Tax	Total No Tax
CONDOS/COTTAGE	\$ 38,732.74	\$ 64.04	35	82
HOTEL / MOTEL	\$ 91,292.77	\$ 950.52	23	13
OTHER	\$ 5,914.60	\$ 135.59	37	152
ONLINE	\$ 13,781.65	\$ -	5	1
TOAL ALL TYPES	\$ 149,721.76	\$ 1,150.15	100	248
Total Collected	\$ 150,871.91			

December-18

Reporting Location	Condos/Cottage Tax	Hotel/Motel Tax	Other Tax	On Line	Total
Atlantic Beach	\$11,333.58	\$13,269.20	\$1,035.72	\$0.00	\$25,638.50
Beaufort	\$950.45	\$7,642.54	\$385.36	\$0.00	\$8,978.35
Cape Carteret	\$40.08	\$11,907.75	\$0.00	\$0.00	\$11,947.83
Emerald Isle	\$25,209.64	\$12,334.58	\$1,658.62	\$0.00	\$39,202.84
PKS / Salter Path/ Indian Beach	\$579.17	\$17,323.17	\$1,872.04	\$0.00	\$19,774.38
Morehead City	\$0.00	\$25,084.85	\$3.60	\$0.00	\$25,088.45
On Line	\$0.00	\$0.00	\$0.00	\$13,781.65	\$13,781.65
Unincorporated	\$683.86	\$4,681.20	\$1,094.85	\$0.00	\$6,459.91
Totals	\$38,796.78	\$92,243.29	\$6,050.19	\$13,781.65	\$150,871.91

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Expenditure Guideline
FOR THE PERIOD(S) JUL 01, 2018 THROUGH DEC 31, 2018

CARTERET COUNTY, NC
GL520R-V08.11 PAGE 1

*** USER MAY NOT HAVE ACCESS ***
*** TO ALL ACCOUNTS IN RANGE ***

	ANNUAL AMENDED BUDGET	ENCUMBERED	ACT MTD POSTED AND IN PROCESS	ACT YTD POSTED AND IN PROCESS	REMAINING BALANCE	PCT
110 GENERAL FUND						
40 ECONOMIC & PHYSICAL DEVELOP						
4901 BEACH NOURISHMENT						
12100 SALARIES	103,595.00	0.00	8,208.00	51,132.11	52,462.89	49 ----
12600 PART TIME WAGES	0.00	0.00	0.00	0.00	0.00	0
18100 FICA EXPENSE	7,925.00	0.00	617.70	3,852.03	4,072.97	48 ----
18200 RETIREMENT CONTRIBUTION	8,135.00	0.00	643.50	4,008.72	4,126.28	49 ----
18300 HOSPITALIZATION INSURANCE	9,020.00	0.00	659.69	3,924.86	5,095.14	43 ----
18500 UNEMPLOYMENT	0.00	0.00	0.00	0.00	0.00	0
18600 WORKMENS COMP	2,000.00	0.00	0.00	1,911.00	89.00	95 -----
18700 401 K PLAN	5,180.00	0.00	410.40	2,556.59	2,623.41	49 ----
20000 SUPPLIES	2,000.00	0.00	0.00	0.00	2,000.00	0
28000 SMALL EQUIPMENT	2,000.00	0.00	0.00	0.00	2,000.00	0
31400 TRAVEL IN-COUNTY	2,400.00	0.00	0.00	88.84	2,311.16	3
32100 TELEPHONE & DATA SERVICES	3,120.00	0.00	353.26	1,015.75	2,104.25	32 ---
32500 POSTAGE	1,000.00	0.00	0.00	166.70	833.30	16 -
39500 TRAVEL	5,880.00	0.00	576.61	1,036.60	4,843.40	17 -
44000 CONTRACTED SERVICES	485,470.00	0.00	8,738.50	147,787.41	337,682.59	30 ---
44100 FEASIBILITY AGREEMENT	400,000.00	0.00	0.00	0.00	400,000.00	0
44200 SECTION 933 REIMBURSEMENT	0.00	0.00	0.00	0.00	0.00	0
49100 DUES AND SUBSCRIPTIONS	5,000.00	0.00	750.00	4,598.50	401.50	91 -----
69900 GRANT CONTRIBUTIONS EDC	0.00	0.00	0.00	0.00	0.00	0
TOTAL: BEACH NOURISHMENT	1,042,725.00	0.00	20,957.66	222,079.11	820,645.89	21 --
TOTAL: ECONOMIC & PHYSICAL DEVELOP	1,042,725.00	0.00	20,957.66	222,079.11	820,645.89	21 --
TOTAL: GENERAL FUND	1,042,725.00	0.00	20,957.66	222,079.11	820,645.89	21 --

Shore Protection Manager

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CARTERET COUNTY BEACH COMMISSION

Agenda Topic Cover Sheet

Shore Protection Office Budget for FY 2019 – 20.

Meeting Date: **2/18/19**

Topic No. **5**

Suggested Action:

The Beach Commission should review the attached FY 2019-20 Shore Protection Office budget, provide any recommendations; and approve the budget at the Commission's February meeting, or before February 21, 2019 for the County Board's subsequent consideration/approval.

A Fiscal Year (FY) 2019-20 budget packet is attached to this agenda topic cover sheet for the Beach Commission's review, comments, and ultimate approval. The budget packet includes;

(1) A draft cover letter to the County.

(2) Revenue Summary.

- (a)** An occupancy tax collection summary of revenue for the past 26 calendar years (CY 1993 - 2018). One table and three graphs).
- (b)** A summary differentiating the revenue by collection sector (hotel/motel and condo/cottage) for CY 2006 - 2018. One table and four graphs.
- (a)** A summary depicting occupancy tax revenue as a function of municipal location for CY 2005-18. One table and one graph.

(3) The proposed FY 2019-20 budget.

- (a)** A spreadsheet presenting the proposed FY 2019-20 budget for the Shore Protection Office comparing each line item to those in our current fiscal year (FY 2018-19).

- (b) An accompanying sheet including two pie diagrams summarizing the percent allocation of proposed expenditures detailed in the recommended FY 2019-20 and our current FY 2018-19 budget.
- (c) A detailed expenditure justification narrative for each line item in the proposed FY 2019-20 budget.

(4) Long range actual and forecasted budget (FY 2001-25).

- (b) Spreadsheet including all revenue, expenditures, and reserves for past, present, and future fiscal years.
- (c) A graph depicting the cumulative reserve balance through time (FY 2001-2025).

(5) Program Summary detailing 2018 accomplishments and 2019 objectives.

In regards to the lattermost attachment, although most of the materials included in this packet are budget related; the accomplishment/objective summary provides a reference highlighting where our main emphasis points are with respect to projects and policy initiatives, and furthermore summarizes what major goals were achieved in the past calendar year (2018) and what our main objectives are going forward (2019 and beyond). The electronic version of the Program Summary includes hyperlinks to many of the important documents, summaries, public notices, etc. germane to each project or policy initiative.

REVENUE SUMMARY

- (1) Occupancy tax collection overview** – The occupancy tax is often considered as a proxy/barometer of tourism visitation, and possibly as a reflection of the overall economy. As discussed many times in the past, the timing of the end point (June 30th) and beginning (July 1st) of the local/State fiscal year divides the most productive time period of occupancy tax collections in half – the summer months, which in turn prevents us from ascertaining a true sense of any collection trend. The timing of the fiscal year also creates reporting discrepancies that can parlay into one fiscal year or the next as the July 4th weekend can be reported as either a “June” or “July” collection depending upon reporting deadlines.

Accordingly even though our expenditure budgeting is placed in terms of the fiscal year, it is more advantageous to review and analyze our revenue on a calendar year basis. To this effect, an occupancy tax collection summary encapsulating the past 26 calendar years of revenue (1993 through 2018) is attached for the Beach Commission’s review. The historical occupancy tax data has been corrected to reflect the 6% overall collection rate instituted by the County Board Commissioners on January 1, 2014 pursuant to the passage of S.L. 2013-223. One half (50%) of the 6% collection is legislatively mandated for the purpose of beach nourishment. Previously, the occupancy tax collection rate was 5% as administered under the auspices of S.L. 2007-112, and effective July 1, 2010 (FY 2010-11), the portion of the occupancy tax dedicated to beach nourishment changed from 50% to 40% of the overall 5% collection rate until S.L. 2013-223 was passed and implemented. A summary of the occupancy tax changes since S.L. 2001-381 where a portion thereof first became legislatively mandated for beach nourishment is provided below.

Summary of Occupancy Tax Collection Rate Changes		
Legislation	Collection Rate (TDA - Beach)	Effective Date
S.L. 2013-223	6% (3% - 3%) or (50/50)	January 1, 2014
S.L. 2007-112	5% (3% - 2%) or (60/40)	July 1, 2010
S.L. 2007-112	5% (2.5% - 2.5%) or (50/50)	July 1, 2007
S.L. 2001-381	5% (2.5% - 2.5%) or (50/50)	January 1, 2002

Again the attached historical summary provides the raw overall (not nourishment specific) value reflecting the collection rate at that given time, and a converted value normalized to 6% so the data can be compared utilizing a common baseline. The attached also includes a series of figures/charts graphically presenting; (1) the total annual occupancy tax collection (raw and corrected for the 6% rate), (2) the percentage increase or decrease of revenue compared to the previous calendar year, and (3) the monthly collections plotted by calendar year for the entire 1993 – 2018 timeframe.

- (2) **Occupancy tax collection trends and forecasted revenue for FY 2019-20** - In reviewing the data, the Beach Commission may note the only years the occupancy tax experienced a decrease from the previous year were 2012 (-1.39%), 2009 (-7.27%), 2008 (-2.28%), and 1996 (-3.42%). For the 1996 dataset, Hurricane *Bertha* impacted the area early in the summer tourist season (July 12th landfall) followed by Hurricane *Fran* that made landfall on September 5th, which had a negative correlative effect on the occupancy tax collection. On the other hand the 2008 and 2009 hurricane seasons for Bogue Banks were benign, and therefore it is very reasonable to conclude the 2008 and 2009 decrease in occupancy tax collections was directly attributable to the National economic recession. The 2012 decrease is attributable to the closing of the Sheraton in Atlantic Beach that occurred in the wake of hurricane *Irene* the year prior. The occupancy tax was down in 2012 by -1.39%, which was on the heels of slightly positive growth following the 2008 and 2009 recession years (the 2010 and 2011 collections were +2.04% and +1.45%, respectively). By comparing the 2012 and the 2011 collection when the Sheraton was closed and open, respectively; we deduced the Sheraton accounted for roughly 3% of the total collection and further postulated the 2012 collection of -1.39% would have been in positive territory if the Sheraton remained in business after hurricane *Irene* in 2011.

In 2018, the occupancy tax was up by **+3.59%** compared to 2017 (2017 = +6.60% compared to 2016) and likely for the following reasons, which are vastly complicated by hurricane *Florence*;

- ***Florence*** - The brunt of hurricane *Florence* was on September 14th and 15th for Carteret County, and is considered as the storm of record based on almost any metric one can think of whether it pertains to water levels, quantity of debris clean-up, volumetric sand loss along Bogue Banks, rainfall, etc. Storm damage to condo/cottages and hotel/motels was prolific. At the conclusion of 2018, more than 500 hotel/motel rooms out of 1,647 total were not available. Comparable numbers for cottages are unknown, but the lack of inventory in itself could drive down occupancy tax revenue if these same types of availability numbers are

present as summer 2019 approaches. However for the remaining portion of 2018 after the hurricane, occupancy tax revenue was *up* by +8.56% (\$1,556,681 from September through December 2018 compared to \$1,433,882 for the same months on 2017). Construction workers and displaced families provided for near full short term occupancy (<90 days) of available rooms and cottages across the County in the months following the hurricane. Thus although inventory was down following *Florence*, there were few vacancies to be found in the shoulder and winter months and therefore raw occupancy tax revenue was up during the September through December 2018 timeframe. The impacts from *Florence* pertaining to the occupancy tax are also meshed with macroscopic trends including;

- A continuing upward trend in the overall National/State economy.
- The condo/cottage sector rebounded in 2017 (+6.10%) after being down slightly in 2016 (-0.65%). This rebound continued in 2018 as collections from the condo/cottage sector were up by +3.32% compared to 2017 (\$4,792,632 vs. \$4,638,698), which also represents 63% of the overall occupancy tax collection (\$4,792,632 of \$7,621,795 total).
- A continued resurgence of the hotel/motel sector. As evidenced in the attached occupancy tax analyses, 2013 was the first year since 2007 the hotel/motel sector experienced positive growth (+12.07%), ending a 6-year continuous decline. The 2014, 2015, 2016, 2017, and 2018 hotel/motel revenue was up by +16.85%, +3.52%, +15.95%, +4.20, and +4.40 respectively. Again, hurricane *Florence* and the inventory issue could complicate matters moving forward into 2019.
- More awareness and hence more collections from the "less than 5" demographic initiated in April 2013 and as mandated by State Statute (NCGS 153A-155).

Collections from the new "On-Line" segment was initiated in January 2016 reflecting the State's successful implementation of what is often referred to as the *Amazon Law*, which effectively require certain larger Internet retailers with no physical presence in North Carolina to collect and pay North Carolina's sales tax, and therefore occupancy tax as well (e.g. Hotwire, Orbitz, Hotels.com, etc.) \$282,246 was collected in 2018, up from \$165,597 collected 2017, and \$83,435 collected in 2016 (the first full year of the on-line collection) – this is essentially all new revenue compared to a few years ago.

The "less than 5" and "on-line" collections can coincide, or can be independent of one another depending if the reservation entity is a physical location in the County or from an on-line resource, and therefore are grouped together as the "**Other Sector**", which as a whole experienced a +2.9% increase from 2018 to 2017 (\$636,161 vs. \$618,152).

The month of July continues to be the highest revenue month (\$1,951,256 in 2018) after eclipsing the \$2 million mark for the first time ever in 2017 (\$2,022,661). Historically August represents the second largest collection month of the year but in 2018, June surpassed August (\$1,582,294 vs. \$1,339,735). However, the June 2018 total could be a result of incongruent reporting with respect to actual occupation and

collections timelines. In May 2018 the collection revenue was down by over -\$250,000 compared to May 2017 (\$314,986 vs. \$574,112, or -45%), yet subsequently the June 2018 collection was up significantly (\$1,582,294 in 2018 vs. \$1,211,103 in June 2017, or +31%) suggesting that May collections were actually reporting in June and therefore artificially inflating the June 2018 revenue total.

Also in 2017, the occupancy tax collection surpassed \$7 million in total collections for the first time ever in a calendar year (\$7,357,361), and again this upward trend continued in 2018 despite hurricane *Florence* (\$7,621,795). In fact, when comparing the 26-year dataset, the annual average rate of occupancy tax increase or decrease is +4.33%, and the total 2018 collection was +196.67% percent higher compared to the corrected 1993 collection.

The proposed FY 2019-20 budget includes a 1% increase compared to our forecasted FY 2018-19 revenue. We traditionally budget for a 3% growth rate but as discussed immediately above, *Florence* is tempering our expectations for 2019. Our forecasted revenue for the current fiscal year (FY 2018-19 is \$3,786,758 and therefore the proposed revenue value for FY 2019-20 is **\$3,824,626** (+1%). Both fiscal years include an overall collection rate of 6% with 50% of the collection attributed to beach nourishment as stipulated in S.L. 2013-223.

EXPENDITURE SUMMARY

The budget packet includes an explanation/justification section detailing each expenditure line item. This premise is a requirement of all County departments as zero-based budgeting is expected, i.e., start at \$0 and work upwards.

In terms of the FY 2019-20 budget, expenditures are divided into five main categories based upon guidelines predicated by the County and developed by the Shore Protection Office (Personnel, Operations, Contracted Services, Projects, and Tax Administration Fee). **Phase I of the Post Florence Renourishment Project planned for Spring 2019 will result in a direct expenditure of \$11,932,790 from the nourishment reserve fund, leaving an estimated balance of \$10,137,537 as we start FY 2019-20.** The Phase I project will emplace 945,446 cubic yards (cy) of sand along 5.2 miles of beach along eastern Emerald Isle and Indian Beach/Salter Path at a total maximum cost of \$20,910,385. The State's Division of Water Resources is providing \$5 million for the project as stipulated in State Session Law 2018-5, Sections 15-6 and 13-10 and will be apportioned to each political subdivision based upon the percentage of cubic yardage to be received per municipality. The balance of cost per municipality is split 75% nourishment reserve and 25% of the Town receiving nourishment. Decisions from FEMA concerning reimbursement for beach nourishment or their "428" program, which provides a fixed-cost number in lump-sum will hopefully be made later this year (2019).

For 2019-20, we plan to implement "Phase II" of the Post *Florence* Renourishment Project that will ideally encompass central and western Emerald Isle, Pine Knoll Shores, and West Atlantic Beach. If the nourishment reserve and municipalities receive either whole or partial FEMA reimbursement for Phase I and advance approval of reimbursement for the engineered beaches of Phase II, then the nourishment reserve will be in very good standing to provide monies for any discrepancies in reimbursement vs. actual cost, and to construct the Atlantic Beach portion of the Phase II effort ("non-engineered" reach). Conversely, if FEMA reimbursement/lump sum decisions are not made any time soon, then we could exhaust the entire reserve we are forecasting to begin with in FY 2019-20 (i.e.,

\$10,137,537 without FEMA reimbursement/lump sum). ***In other words, we cannot absorb providing two consecutive years of ~\$12 million to complete both Phases of the Post Florence Renourishment Project without full or partial FEMA reimbursement/lump sum.*** Therefore considering the Shore Protection Office expenditure budget rarely exceeds \$1 million annually and the uncertainty with respect to FEMA and the impacts to the nourishment reserve, we are NOT going to include any "project" funding in the FY 2019-20 budget. If we do receive FEMA reimbursement/lump sum, then we will accordingly show this as a revenue line item and subsequently provide for a budget amendment on the expenditure side of the ledger to execute Phase II of the Post Florence Renourishment Project in winter 2019-20.

With this caveat in mind, the FY 2019-20 Shore Protection Office expenditure budget as proposed is \$586,502 compared to the \$685,593 FY 2018-19 value across the Personnel, Operations, Contracted Services, and Tax Administration Fee categories only. This represents a -14.5% (\$99,091) decrease, which is mostly attributable to a \$100,000 reduction in the Contracted Services line item as the Bogue Banks Master Plan (lump sum agreement) comes to a close and reduction in our legal retainer is also proposed. There are very, very small increases in the Operations budget based upon historic telephone charges and a commensurate increase to the Tax Administration Fee associated with our projected revenue.

- (1) Personnel** – The FY 2019-20 recommended budget for salary (\$103,595) does not include any adjustments for cost-of-living or direct recommendations from the Beach Commission or County General Government. The remaining personnel items including medical insurance, FICA, 401k contribution/matching, etc. are recommended by utilizing historical formulas and/or values. ***(\$133,855 personnel total)***
- (2) Operations** – These expenditures include projected costs associated with supplies, small equipment, telephone, postage, travel, dues & subscriptions, etc. Predicated upon historical expenditure levels, the total proposed budget for operations is \$21,940 in FY 2019-20 and remains near the same as FY 2018-19. ***(\$21,940)***
- (3) Contracted Services** – This is one of our largest expenditure line items (\$385,470 or 66% of the entire \$586,502 expenditure budget), and includes the following six components (A – F). As mentioned above, there is a -21% decrease or -\$100,000 in Contracted Services proposed for FY 2019-20 stemming from a large reduction in our Master Plan costs as the planning/permitting phase reaches conclusion complimented by a reduction in our legal retainer. ***(\$385,470)***

(A) Legal Counsel (\$50,000). The 2008 legal settlement reached between the County and the U.S. Corps of Engineers concerning dredged material management issues at the Morehead City Harbor included the preparation of a Dredged Material Management Plan (DMMP) by October 2011. However, the National Park Service (NPS) interjected in 2010 by requesting the "right of first refusal" to 40% of the sand that has traditionally gone to Bogue Banks to begin to be placed on the NPS property of Shackleford Banks. The NPS also became a cooperating agency with the Corps and the Draft DMMP was released in the last quarter of 2013. The draft DMMP included beach nourishment on Shackleford Banks and did not include a mechanism to allow the local governments to participate financially or administratively in "delta" projects whereby dredged sand planned to be disposed offshore in year 2 and 3 of the recurring 3-year cycle could be utilized for beach nourishment. However we successfully lobbied the NPS to ask the Corps of Engineers to eliminate the beach nourishment option (June

2014); which also took intense legal consultation, including seed funding for the "KeepShackWild.com" effort.

Since 2006, roughly \$1,050,767 of attorney fees have been accumulated as of the end of calendar 2018, but this total also includes the seed money for "KeepShackWild.com" and related issues as described above (~\$81,000) and legal counsel concerning both the proposed loggerhead critical habitat designation and red-knot rufa shorebird listing that was cost-shared with New Hanover County, Oak Island, Caswell Beach, and Holden Beach (~\$31,000 to date). When "KeepShackWild" (~\$81,000), endangered species (~\$31,000), and other issues such as oil/gas exploration, etc. (~\$25,500) are considered, roughly \$137,859 of the \$1,050,767 mentioned above are related to more tangential issues than those solely attributed to the Morehead City Harbor.

We budgeted \$150,000 for FY 2015-16 anticipating some legal services would be required for the Bureau of Ocean Energy Management's release of the 2017-2022 Draft Oil & Gas Leasing Program, but the legal interface was not as intense as expected. In FY 2017-18 and FY 2018-19 we budgeted \$75,000, which provided budget accommodation space to extensively utilize legal counsel to formulate our response and work with the State in regards to the Corps of Engineers scoping request and consequent Draft Environmental Assessment concerning realigning the Morehead City Harbor Channel in an effort to avoid shoaling along the east (Shackleford Banks) side of the fixed channel. Legal counsel was also used for Memorandum of Agreement (MOA) issues between Atlantic Beach and the Corps for potential sand placement along Bogue Banks.

A reduction from \$75,000 to \$50,000 is proposed for legal counsel in FY 2019-20 based upon historic utilization rates. However, the Shore Protection Office foresees issues such as the recent Morehead City Harbor channel realignment project, the Corps of Engineers continued reliance on utilizing the ODMDS as a disposal site rather than the nearshore berm(s), and potential MOA negotiations for the next Atlantic Beach nourishment event as pressing issues that will likely entail intense legal counsel and the preparation of formal responses.

(B) Miscellaneous Engineering Services (\$20,000). Moffatt & Nichol is considered as our project engineer for all issues/correspondences concerning dredging at the Morehead City Harbor (e.g., DMMP, [channel realignment response](#), etc.), or other issues that pertain to dredging/beach nourishment within the County (e.g., the [Beneficial Use of Dredged Material Pilot Program](#), waterway permitting, [County dredge white paper](#), [FIRM mapping](#), etc.). \$20,000 is estimated as a retainer/contingency cost for FY 2019-20 (same as previous years). This retainer amount is contractually included as an option within our executed Master Nourishment Plan contract with Moffatt & Nichol.

(C) Beach Surveying (\$289,850). In 2018 a new 5-year contract extension for the annual beach surveying program was executed including a fixed annual cost of \$155,050 for annual activities along Bogue Banks, Shackleford Banks, and Bear Island (164 profiles) AND \$119,800 for a contingency, "on-call" Bogue Banks only post-storm survey (122 profiles) totaling \$274,850. The current monitoring contract extension (2018 – 2022) also includes a new a more full coverage, concentrated survey of the Bogue Banks "hot spots" located in east Emerald Isle and Pine Knoll Shores utilizing a mobile laser scanner along a topographic stretch from central Emerald Isle to west Atlantic Beach incorporating 56 profiles. The laser scanner can be considered as a

swath acquisition system, obtaining millions of elevation data points per survey event between profiles (topography only). The hot spot reach is surveyed (laser scanned) twice per year – once during routine annual surveying activities before the hurricane season and once after hurricane season. The general goals of the hot spot analysis are; (1) to constrain the specific geographic area of the hot spots, (2) augment other data to determine what might causing the hot spots, and (3) most importantly, use this information to design more effective nourishment projects.

Also included under the “beach surveying” constituent of contracted services is a semi-annual survey of Bogue Inlet utilizing the firm of Geodynamics. The surveys include full topo- and swath bathymetric coverage of “the Point” in Emerald Isle and the adjacent channel and shoal complex related to Bogue Inlet. A small Powerpoint/pdf type report is subsequently generated/updated for each event. The survey and report are prepared and delivered at a deeply discounted rate because of the flexibility afforded by the self-determined survey window, and Geodynamics’ community discount applied to the effort. Surveys are conducted near June and November each year for \$7,500/event or \$15,000 for the year. A major feature of the Bogue Banks Master Plan is a Bogue Inlet “safe box” whereby a channel realignment event will be triggered once the channel itself migrates beyond the safe box and therefore closer to the Point. These semi-annual surveys are used to monitor how close the channel is to the safe box, and the footprint of the safe box was developed via a channel morphology and hydraulic assessment conducted as part of the Master Plan. The \$15,000 hi-resolution Bogue Inlet coupled with \$274,850 anticipated annual survey cost (includes the contingency post-storm survey and new full-coverage hot spot topographic laser scanning project) equates to a \$289,850 total expenditure estimate.

(D) Master Nourishment Plan. (\$15,000). The Bogue Banks Master Nourishment Plan has resulted in a 50-year nourishment/shore protection plan for the entire island of Bogue Banks and includes the preparation of a Programmatic Environmental Impact Statement (PEIS). The latter (PEIS) will function as the “one-stop” permitting vehicle for the duration of the project and an agreement with Moffatt & Nichol was signed in January 2010 for a not-to-exceed cost of ~\$1.7 million for this effort. The contract has undergone two amendments since - (1) to help facilitate the physical sand search component for both the Master Plan and an interim Emerald Isle Hot-Spot Project that ultimately became the Post-Irene Renourishment Project, and (2) unanticipated additional modeling work to create a Bogue Inlet “safe box”, and to also develop a standalone Biological Assessment for the Master Plan that would result in a project specific endangered species take limit rather than depending on the regional Biological Opinion. The total contract amount inclusive of the amendments is \$2,787,124. As of the conclusion of the 2018 calendar year, ~\$2,775,470 has been invoiced to date and therefore leaves a balance of \$11,654. The final PEIS was completed in the fall of 2018 including the concurrent issuance of State and federal permits/authorizations that were seamlessly utilized for the Post-Florence Renourishment Project. Considering \$11,654 is remaining in the contract, \$15,000 is considered as a safe, “round up” budget number for FY 2019-20 to tie up the loose ends (namely a BOEM sand and gravel lease), and therefore conclude the contract.

(E) Mapping Website (\$7,500). \$7,500 of the contracted services budget is for our internet mapping maintenance fee with *Geodynamics, LLC* for web-hosting, updating, and trouble-shooting the website www.protectthebeachmaps.com. The site is updated with new data layers each year as part of the annual stipend including items such as new shorelines from our monitoring program, updated parcel information, new aerial photography, etc. In December 2012 the site was upgraded from the ArcGIS to

ArcServer platform, and in 2018 www.protectthebeachmaps.com undergone a large-scale redesign; including new "swipe" features, a "point and click" historical beach profile option, and more.

(F) Office Cleaning (\$3,120). Outer Banks Cleaning is our office cleaning service and was selected for "economies of scale" purposes. Our office is located within a single building housing the Town of Emerald Isle's Police Department, Board of Commissioner's meeting room, and additional Town storage space. Outer Banks Cleaning is used by the Police Department and Town General Government and therefore was selected as a cleaning service for the Shore Protection Office (\$60/week).

- (4) Projects** – None formally budgeted but as introduced above, Phase II of the Post *Florence* Renourishment Project is tentatively scheduled for winter 2019-20 and will encompass central and west Emerald Isle, Pine Knoll Shores and west Atlantic Beach. However the project will be predicated based upon FEMA's reimbursement/lump sum determination. Ultimately the nourishment reserve, if reimbursed for Phase I (winter 2018-19), should be in very good standing to provide monies for any discrepancies in reimbursement vs. actual cost for any of the beach municipalities, and to construct the Atlantic Beach portion of the Phase II effort ("non-engineered" reach). Considering the FEMA reimbursement/lump sum issue could sway the reserve by millions of dollars one way or the other, it will be addressed at a more appropriate time during the course of FY 2019-20. **(\$0)**

- (5) County Occupancy Tax Administration Fee** - Per S.L. 2013-223 and previous versions approved by the General Assembly, Carteret County can implement an administration fee for the occupancy tax including up to 3% of the first \$500,000 of gross revenue and 1% of the remaining gross receipts collected each year. Beginning on January 1, 2014 the occupancy tax collection rate was increased to 6% via S.L. 2013-223 with 50% (or 3% of the total 6% collection) attributed to the nourishment reserve – in other words, the nourishment reserve absorbs one half of the administration fee. Our estimate was generated by applying this formula to our forecasted FY 2019-20 revenue described previously in this memorandum (\$7,649,252 total or \$3,824,626 for the nourishment reserve). **(\$43,246)**

FORECASTED LONG-RANGE BUDGET & RESERVE SUMMARY (FY 2001-25)

The long-range budget forecast (next five fiscal years – FY 2019-25) as presented includes no beach nourishment *construction* funding either as an offshoot from the Master Nourishment Plan/Post *Florence* Project or the Corps of Engineers' 50-year Coastal Storm Damage Reduction Project. As the Commission is aware, nourishment projects can cost well over \$10 million and forecasting the anticipated chronology of these events is proving to be difficult and can overwhelm our budget forecasts, especially if a certain nourishment event is needed more immediately than previously believed or is delayed by a year or two (or more). And again, decisions and the timing pertaining to FEMA reimbursement/lump sum are also another source of uncertainty.

The long-term budget also includes our amended FY 2018-19 budget, the proposed FY 2019-20 budget, and unless otherwise noted, assumes; (a) the occupancy tax revenue will increase at an annual rate of 3%, (b) the collection rate will remain at 6% with a "50/50" split between the County's TDA/nourishment-reserve as codified in S.L. 2013-223, and (c) expenditures for the Shore Protection Office will experience a 3% annual increase from a base rate of \$586,502 (our proposed FY 2019-20 "no construction" budget) to

account for items such as contracted services, subscriptions, office supplies, etc. Utilizing these assumptions, we anticipate the nourishment reserve should be near **\$32 million** at the conclusion of FY 2024-25 (5-year projection). Our reserve cap is now \$30 million per S.L. 2013-223 and would be hypothetically exceeded coincidentally in FY 2024-25. Of course the 5-year forecast does not include perhaps millions of dollars required for beach nourishment projects above FEMA reimbursement/lump sum received in the upcoming years. Although perhaps not realistic, I thought it would be a good exercise just to see how large the reserve could grow. This is a good example why the Commission should always remain cautious when using our forecasted reserve numbers for the sole reason that deviations in anticipated revenues or expenditures are compounded throughout time and can cause the reserve number several years from now to deviate significantly from our estimates (notwithstanding the nature of economic uncertainty as well).

In closing, the attached budget should be considered as a recommendation to the Beach Commission and can be modified to reflect the Commission's priorities and desires. The budget is formally due to the County by February 22nd at the close of the business day and obviously if the Commission can't approve the budget at our February 18th regular meeting, then we will need to meet again before the 22nd. Much of the material contained in the budget packet will be typed into a network system the County operates (ACS Financial System) and as always, the Shore Protection Office is looking forward to discussing the budget with the Beach Commission. This is always a good exercise to map where we have been and ensure the direction we are heading remains on a course the Commission is comfortable with.

(1) Draft cover letter to the County.

Shore Protection Manager

Greg L. Rudolph
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February 22, 2019

Tommy Burns, County Manager
Dee Meshaw, Finance Director
Carteret County
Courthouse Square
Beaufort, North Carolina 28516

Re: Shore Protection Office Budget for Fiscal Year (FY) 2019-20

Dear Mr. Burns and Mrs. Meshaw,

Please find attached the Shore Protection Office's proposed budget for FY 2019-20 including additional documents and visual aids generated for the County Beach Commission's "pre-approval" which were developed in an effort to comprehensively illustrate expenditures, and occupancy tax revenues legislatively designated for beach nourishment. The attached memorandum to the Beach Commission is perhaps most useful in terms of describing the conceptual framework utilized to develop the budget. The budget was unanimously approved with a few minor adjustments by the Beach Commission members in attendance at their regularly-scheduled monthly meeting on February 18th for your recommendation to the County Board of Commissioners. These adjustments have been incorporated into the attached (notwithstanding information contained in the original Beach Commission memorandum cover sheet).

The Shore Protection Office is funded 100% by the portion of the County's occupancy tax designated for beach nourishment, which was first instituted in 2001 via S.L. 2001-381, modified as S.L. 2007-112 for reasons mostly attributed to a proposed convention center, and now administered in accordance with S.L. 2013-223. The County Board of Commissioners instituted S.L. 2013-223 on January 1, 2014 that effectively increased the occupancy tax collection rate from 5% to 6%, with the additional 1% designated for the sole purpose of beach nourishment resulting in a 50/50 split of the collection between the County's TDA and the nourishment reserve. Presently each 1% of the collection yields approximately \$1.2 million annually; or just about over \$7.6 million total.

Previously, the occupancy tax collection rate was 5% as administered under the auspices of S.L. 2007-112, and effective July 1, 2010 (FY 2010-11), the portion of the occupancy tax dedicated to beach nourishment changed from 50% to 40% of the overall 5% collection rate until S.L. 2013-223 was passed and implemented. A summary of the occupancy tax changes since S.L. 2001-381 where a portion thereof first became legislatively mandated for beach nourishment is provided below.

Summary of Occupancy Tax Collection Rate Changes		
Legislation	Collection Rate (TDA - Beach)	Effective Date
S.L. 2013-223	6% (3% - 3%) or (50/50)	January 1, 2014
S.L. 2007-112	5% (3% - 2%) or (60/40)	July 1, 2010
S.L. 2007-112	5% (2.5% - 2.5%) or (50/50)	July 1, 2007
S.L. 2001-381	5% (2.5% - 2.5%) or (50/50)	January 1, 2002

Revenues

To gain a better understanding of occupancy tax collection trends over time, a historical summary of occupancy tax revenues encompassing the past 26 calendar years (1993 through 2018) was presented to the Beach Commission during this year's budget adoption process and is included in the budget packet. Previous collections were corrected to reflect the current 6% rate to provide a common baseline for analysis. To this end, the only years the occupancy tax experienced a decrease from the previous year were 2012 (-1.39%), 2009 (-7.27%), 2008 (-2.28%), and 1996 (-3.42%). For the 1996 dataset, Hurricane *Bertha* impacted the area early in the summer tourist season (July 12th landfall) followed by Hurricane *Fran* that made landfall on September 5th, which had a negative correlative effect on the occupancy tax collection. The 2008 and 2009 hurricane seasons for Bogue Banks were benign, and therefore it is very reasonable to conclude the 2008 and 2009 decrease in occupancy tax collections was directly attributable to the National economic recession. The 2012 decrease (-1.39%) is attributable to the closing of the Sheraton, which we estimated to have constituted 3% of the overall collection alone; and therefore it is conceivable the 2012 collection would have been in positive territory if the Sheraton remained in business after hurricane *Irene* in 2011.

In 2018, the occupancy tax was up by **+3.59%** compared to 2017 (2017 = +6.60% compared to 2016) and likely for the following reasons, which are vastly complicated by hurricane *Florence*;

- Florence*** - The brunt of hurricane *Florence* was on September 14th and 15th for Carteret County, and is considered as the storm of record based on almost any metric one can think of whether it pertains to water levels, quantity of debris clean-up, volumetric sand loss along Bogue Banks, rainfall, etc. Storm damage to condo/cottages and hotel/motels was prolific. At the conclusion of 2018, more than 500 hotel/motel rooms out of 1,647 total were not available. Comparable numbers for cottages are unknown, but the lack of inventory in itself could drive down occupancy tax revenue if these same types of availability numbers are present as summer 2019 approaches. However for the remaining portion of 2018 after the hurricane, occupancy tax revenue was *up* by +8.56% (\$1,556,681 from September through December 2018 compared to \$1,433,882 for the same months on 2017). Construction workers and displaced families provided for near full short term occupancy (<90 days) of available rooms and cottages across the County in the months following the hurricane. Thus although inventory was down following *Florence*, there were few vacancies to be found in the shoulder and winter months of the tourism season and therefore raw occupancy tax revenue was up during the

September through December 2018 timeframe. The impacts from *Florence* pertaining to the occupancy tax are also meshed with macroscopic trends including;

- (1) Continuing upward trend in the overall National/State economy.
- (2) The condo/cottage sector rebounded in 2017 (+6.10%) after being down slightly in 2016 (-0.65%). This rebound continued in 2018 as collections from the condo/cottage sector were up by +3.32% compared to 2017 (\$4,792,632 vs. \$4,638,698), which also represents 63% of the overall occupancy tax collection (\$4,792,632 of \$7,621,795 total).
- (3) A continued resurgence of the hotel/motel sector. As evidenced in the attached occupancy tax analyses, 2013 was the first year since 2007 the hotel/motel sector experienced positive growth (+12.07%), ending a 6-year continuous decline. The 2014, 2015, 2016, 2017, and 2018 hotel/motel revenue was up by +16.85%, +3.52%, +15.95%, +4.20, and +4.40 respectively. Again, hurricane *Florence* and the inventory issue could complicate matters moving forward into 2019.
- (4) More awareness and hence more collections from the "less than 5" demographic initiated in April 2013 and as mandated by State Statute (NCGS 153A-155).

Collections from the new "On-Line" segment was initiated in January 2016 reflecting the State's successful implementation of what is often referred to as the *Amazon Law*, which effectively require certain larger Internet retailers with no physical presence in North Carolina to collect and pay North Carolina's sales tax, and therefore occupancy tax as well (e.g. Hotwire, Orbitz, Hotels.com, etc.) \$282,246 was collected in 2018, up from \$165,597 collected 2017, and \$83,435 collected in 2016 (the first full year of the on-line collection) – this is essentially all new revenue compared to a few years ago.

The "less than 5" and "on-line" collections can coincide, or can be independent of one another depending if the reservation entity is a physical location in the County or from an on-line resource, and therefore are grouped together as the "**Other Sector**", which as a whole experienced a +2.9% increase from 2018 to 2017 (\$636,161 vs. \$618,152).

The month of July continues to be the highest revenue month (\$1,951,256 in 2018) after eclipsing the \$2 million mark for the first time ever in 2017 (\$2,022,661). Historically August represents the second largest collection month of the year but in 2018, June surpassed August (\$1,582,294 vs. \$1,339,735). However, the June 2018 total could be a result of incongruent reporting with respect to actual occupation and collection timelines. In May 2018 the collection revenue was down by over -\$250,000 compared to May 2017 (\$314,986 vs. \$574,112, or -45%), yet subsequently the June 2018 collection was up significantly (\$1,582,294 in 2018 vs. \$1,211,103 in June 2017, or +31%) suggesting the May collections were actually reported in June and therefore artificially inflating the June 2018 revenue total.

For FY 2019-20, the proposed budget includes a 1% increase compared to our forecasted FY 2018-19 revenue. We traditionally budget for a 3% growth rate but as discussed immediately above, *Florence* is tempering our expectations for 2019. Our forecasted revenue for the current fiscal year (FY 2018-19 is \$3,786,758 and therefore the proposed revenue value for FY 2019-20 is **\$3,824,626** (+1%).

Expenditures

Expenditures are divided into five main categories based upon guidelines predicated by the County's Finance Department and developed by the Shore Protection Office (Personnel, Operations, Contracted Services, Projects, and Tax Administration Fee). **Phase I of the Post Florence Renourishment Project planned for Spring 2019 will result in a direct expenditure of \$11,932,790 from the nourishment reserve fund, leaving an estimated balance of \$10,137,537 as we start FY 2019-20.** The Phase I project will emplace 945,446 cubic yards (cy) of sand along 5.2 miles of beach along eastern Emerald Isle and Indian Beach/Salter Path at a total maximum cost of \$20,910,385. The State's Division of Water Resources is providing \$5 million for the project as stipulated in State Session Law 2018-5, Sections 15-6 and 13-10 and will be apportioned to each political subdivision based upon the percentage of cubic yardage to be received per municipality. The balance of cost per municipality is split 75% nourishment reserve and 25% of the Town receiving nourishment. Decisions from FEMA concerning reimbursement for beach nourishment or their "428" program, which provides a fixed-cost number in lump-sum will hopefully be made later this year (2019).

For 2019-20, we plan to implement "Phase II" of the Post *Florence* Renourishment Project that will ideally encompass central and western Emerald Isle, Pine Knoll Shores, and West Atlantic Beach. If the nourishment reserve and municipalities receive either whole or partial FEMA reimbursement for Phase I and advance approval of reimbursement for the engineered beaches of Phase II, then the nourishment reserve will be in very good standing to provide monies for any discrepancies in reimbursement vs. actual cost, and to construct the Atlantic Beach portion of the Phase II effort ("non-engineered" reach). Conversely, if FEMA reimbursement/lump sum decisions are not made any time soon, then we could exhaust the entire reserve we are forecasting to begin with in FY 2019-20 (i.e., \$10,137,537 without FEMA reimbursement/lump sum). ***In other words, we cannot absorb providing two consecutive years of ~\$12 million to complete both Phases of the Post Florence Renourishment Project without full or partial FEMA reimbursement/lump sum.*** Therefore considering the Shore Protection Office expenditure budget rarely exceeds \$1 million annually and the uncertainty with respect to FEMA and the impacts to the nourishment reserve, we are NOT going to include any "project" funding in the FY 2019-20 budget. If we do receive FEMA reimbursement/lump sum, then we will accordingly show this as a revenue line item and subsequently provide for a budget amendment on the expenditure side of the ledger to execute Phase II of the Post *Florence* Renourishment Project in winter 2019-20.

With this caveat in mind, the FY 2019-20 Shore Protection Office expenditure budget as proposed is \$586,502 compared to the \$685,593 FY 2018-19 value across the Personnel, Operations, Contracted Services, and Tax Administration Fee categories only. This represents a -14.5% (\$99,091) decrease, which is mostly attributable to a \$100,000 reduction in the Contracted Services line item as the Bogue Banks Master Plan (lump sum agreement) comes to a close and reduction in our legal retainer is also proposed. There are very, very small increases in the Operations budget based upon historic telephone charges and a commensurate increase to the Tax Administration Fee associated with our projected revenue.

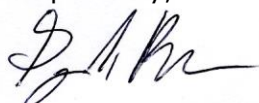
Beach Nourishment Reserve

And lastly and on a much broader scale, the attached packet also includes a 5-year forecasted (FY 2020-25) budget incorporating the collection rate changes stipulated in S.L. 2013-223, a 3% annual revenue growth rate, and hypothetically; *no* major nourishment

projects to be constructed within this 5-year window. Utilizing these assumptions, we anticipate the nourishment reserve should be near **\$32 million** at the conclusion of FY 2024-25 (5-year projection). Our reserve cap is now \$30 million per S.L. 2013-223 and would be hypothetically exceeded coincidentally in FY 2024-25. Of course the 5-year forecast does not include perhaps millions of dollars required for beach nourishment projects above FEMA reimbursement/lump sum received in the upcoming years. Although perhaps not realistic, the Shore Protection Office thought it would be a good exercise just to see how large the reserve could grow.

The budget information included in the attached will be keyed into the County's ACS Financial System where applicable and I look forward to discussing the FY 2019-20 Shore Protection Office budget with the Finance Department if needed and of course, please do not hesitate to contact me if you have any questions that immediately come to mind.

Respectfully,



Greg "rudi" Rudolph
Shore Protection Manager

(2) Revenue Summary.

- (a)** An occupancy tax collection summary of revenue for the past 26 calendar years (CY 1993 - 2018) of revenue (**1 table and three graphs**).
- (b)** A summary differentiating the revenue by collection sector (hotel/motel and condo/cottage) for CY 2006 - 2018. **1 table and four graphs**.
- (c)** A summary depicting occupancy tax revenue as a function of municipal location for CY 2005-18 (**table and graph**).

CARTERET COUNTY
Occupancy Tax Revenues
1993 - 2018

% (+/-) 4.33%

Annual avg. over 25 years

% (+/-) 196.67%

2018 compared to 1993 only

	2018	2017	2016	2015	2014	2013		2012		2011		2010		2009		2008		2007		2006		2005	
	6%	6%	6%	6%	6%	5%	6%	5%	6%	5%	6%	5%	6%	5%	6%	5%	6%	5%	6%	5%	6%	5%	6%
Jan.	\$108,736	\$90,369	\$72,738	\$65,107	\$54,359	\$40,796	\$48,955	\$42,097	\$50,517	\$49,487	\$59,384	\$40,016	\$48,019	\$49,220	\$59,064	\$67,424	\$80,909	\$77,862	\$93,434	\$75,051	\$90,061	\$55,266	\$66,319
Feb.	\$147,363	\$102,895	\$80,744	\$66,976	\$60,118	\$44,081	\$52,897	\$55,195	\$62,634	\$51,810	\$62,172	\$57,626	\$69,151	\$46,848	\$56,218	\$67,406	\$80,887	\$79,240	\$95,087	\$66,079	\$79,295	\$49,663	\$59,595
Mar.	\$194,638	\$198,697	\$197,020	\$142,289	\$121,346	\$106,740	\$128,088	\$95,434	\$114,521	\$83,473	\$100,167	\$78,206	\$93,847	\$71,530	\$85,836	\$118,650	\$142,380	\$104,548	\$125,458	\$116,113	\$139,336	\$83,777	\$100,532
Apr.	\$426,106	\$378,586	\$267,064	\$238,039	\$218,570	\$156,472	\$187,767	\$188,585	\$226,302	\$197,151	\$236,581	\$144,164	\$172,997	\$190,697	\$228,837	\$160,055	\$192,066	\$232,053	\$279,004	\$205,425	\$246,510	\$147,566	\$177,079
May	\$314,986	\$574,112	\$495,403	\$519,427	\$530,041	\$311,601	\$373,921	\$306,687	\$368,024	\$304,315	\$365,178	\$319,001	\$382,801	\$334,806	\$401,767	\$328,625	\$394,350	\$302,984	\$363,581	\$288,001	\$345,602	\$280,079	\$336,095
June	\$1,582,294	\$1,211,103	\$1,254,762	\$1,194,984	\$1,119,788	\$938,458	\$1,126,150	\$868,113	\$1,041,735	\$724,754	\$869,704	\$734,326	\$881,192	\$759,466	\$911,360	\$492,499	\$1,130,998	\$807,801	\$1,044,961	\$800,439	\$960,526	\$714,075	\$856,890
July	\$1,951,256	\$2,022,661	\$1,945,706	\$1,799,562	\$1,714,309	\$1,200,365	\$1,440,439	\$1,196,963	\$1,436,356	\$1,405,328	\$1,686,393	\$1,343,491	\$1,612,189	\$1,184,624	\$1,421,548	\$1,187,108	\$1,424,529	\$1,291,446	\$1,549,736	\$1,306,013	\$1,567,216	\$1,266,721	\$1,520,065
Aug.	\$1,339,735	\$1,345,057	\$1,310,899	\$1,310,391	\$1,327,500	\$1,058,562	\$1,270,274	\$950,814	\$1,140,977	\$867,852	\$1,041,423	\$936,552	\$1,123,862	\$934,419	\$1,143,936	\$1,044,906	\$1,253,887	\$993,315	\$1,143,978	\$865,921	\$1,039,105	\$881,161	\$1,057,393
Sept.	\$720,343	\$651,908	\$632,513	\$598,281	\$514,648	\$392,983	\$471,580	\$364,387	\$437,265	\$419,086	\$502,903	\$344,430	\$413,316	\$355,957	\$427,148	\$321,355	\$385,626	\$378,791	\$454,459	\$342,258	\$410,710	\$288,621	\$346,346
Oct.	\$304,571	\$424,176	\$354,178	\$357,967	\$348,348	\$247,497	\$296,997	\$183,054	\$219,665	\$209,716	\$251,660	\$246,063	\$295,276	\$223,963	\$268,756	\$241,507	\$289,809	\$284,061	\$340,874	\$226,994	\$272,393	\$236,929	\$284,315
Nov.	\$380,894	\$260,361	\$192,591	\$148,172	\$125,217	\$121,388	\$145,665	\$100,811	\$120,973	\$93,816	\$112,579	\$101,058	\$121,269	\$96,906	\$116,288	\$107,397	\$128,876	\$124,194	\$149,032	\$122,378	\$146,854	\$133,928	\$160,713
Dec.	\$150,872	\$97,436	\$98,029	\$89,584	\$92,698	\$60,498	\$72,597	\$42,680	\$51,216	\$47,160	\$56,592	\$37,491	\$44,989	\$51,806	\$62,168	\$52,558	\$63,069	\$47,890	\$57,421	\$59,305	\$71,166	\$52,862	\$63,434
Total	\$7,621,795	\$7,357,361	\$6,901,648	\$6,530,780	\$6,224,944	\$4,679,441	\$5,615,329	\$4,391,821	\$5,270,185	\$4,453,946	\$5,344,735	\$4,390,291	\$5,268,349	\$4,302,375	\$5,162,851	\$4,302,375	\$5,162,851	\$4,639,488	\$5,567,386	\$4,747,595	\$5,697,114	\$4,473,977	\$5,568,773

% (+/-) previous year	3.59%	6.60%	5.68%	4.88%	10.89%	6.55%	-1.39%	1.45%	2.04%	-7.27%	-2.28%	6.12%	6.76%	14.00%
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	2004		2003		2002		2001		2000		1999		1998		1997		1996		1995		1994		1993	
	5%	6%	5%	6%	5%	6%	3%	6%	3%	6%	3%	6%	3%	6%	3%	6%	3%	6%	3%	6%	3%	6%	3%	6%
Jan.	\$35,643	\$42,772	\$47,052	\$56,462	\$29,583	\$35,500	\$19,406	\$38,812	\$20,719	\$41,438	\$19,789	\$39,578	\$20,615	\$41,231	\$25,567	\$51,134	\$17,131	\$34,263	\$21,241	\$42,482	\$22,521	\$45,041	\$17,703	\$35,406
Feb.	\$55,405	\$66,486	\$45,956	\$55,147	\$44,501	\$53,401	\$26,586	\$53,171	\$29,805	\$59,610	\$31,269	\$62,538	\$23,427	\$46,853	\$23,585	\$47,170	\$21,830	\$43,661	\$23,688	\$47,375	\$25,140	\$50,280	\$18,887	\$37,774
Mar.	\$70,611	\$84,733	\$76,157	\$91,388	\$94,833	\$113,800	\$43,389	\$86,778	\$41,618	\$86,235	\$40,565	\$81,131	\$40,217	\$80,435	\$46,285	\$92,570	\$32,920	\$65,839	\$37,437	\$74,474	\$33,350	\$66,700	\$27,773	\$55,546
Apr.	\$158,758	\$190,510	\$166,506	\$199,808	\$151,237	\$181,484	\$93,244	\$186,489	\$88,068	\$176,135	\$91,280	\$182,561	\$79,921	\$159,842	\$73,695	\$147,391	\$75,441	\$150,882	\$40,324	\$80,647	\$75,101	\$150,201	\$67,140	\$134,281
May	\$279,286	\$335,144	\$267,000	\$320,400	\$258,209	\$309,851	\$124,364	\$248,728	\$139,356	\$278,712	\$139,012	\$278,025	\$132,602	\$265,203	\$119,686	\$239,372	\$122,813	\$245,626	\$162,380	\$324,759	\$115,457	\$230,915	\$111,006	\$222,011
June	\$628,041	\$753,649	\$668,346	\$820,015	\$654,333	\$785,200	\$365,196	\$730,392	\$321,567	\$643,134	\$297,591	\$595,182	\$282,419	\$564,838	\$275,238	\$550,476	\$253,311	\$506,622	\$235,767	\$471,535	\$213,565	\$427,129	\$196,623	\$393,245
July	\$1,140,099	\$1,368,119	\$938,334	\$1,126,000	\$668,462	\$1,042,154	\$532,108	\$1,064,215	\$540,981	\$1,081,962	\$522,176	\$1,044,352	\$440,751	\$881,501	\$427,231	\$854,462	\$303,438	\$606,076	\$366,597	\$733,194	\$361,568	\$723,136	\$321,603	\$643,206
Aug.	\$696,574	\$835,889	\$740,863	\$889,036	\$668,462	\$838,602	\$363,908	\$727,817	\$337,157	\$674,314	\$348,848	\$697,697	\$338,440	\$676,881	\$275,003	\$550,006	\$263,805	\$636,009	\$263,681	\$527,362	\$275,446	\$550,892	\$248,782	\$497,565
Sept.	\$269,793	\$323,751	\$282,377	\$338,853	\$238,742	\$286,491	\$171,275	\$342,550	\$132,387	\$264,774	\$105,804	\$211,608	\$138,287	\$276,575	\$160,716	\$321,431	\$96,187	\$192,374	\$144,102	\$288,204	\$128,466	\$256,931	\$135,777	\$271,554
Oct.	\$217,408	\$260,889	\$197,935	\$237,522	\$160,427	\$192,512	\$96,441	\$192,882	\$109,627	\$219,255	\$88,936	\$177,871	\$117,915	\$235,830	\$105,719	\$211,437	\$86,729	\$165,457	\$83,173	\$166,346	\$87,307	\$174,615	\$86,984	\$173,968
Nov.	\$91,618	\$109,941	\$95,790	\$114,948	\$105,153	\$126,183	\$41,457	\$82,915	\$52,856	\$105,712	\$53,492	\$106,984	\$46,342	\$92,683	\$42,387	\$84,775	\$39,882	\$79,763	\$35,368	\$70,736	\$37,027	\$74,055	\$37,700	\$75,400
Dec.	\$32,924	\$39,509	\$48,883	\$58,660	\$37,333	\$44,799	\$27,480	\$54,959	\$20,008	\$40,017	\$25,482	\$50,964	\$21,607	\$43,214	\$18,397	\$36,794	\$19,448	\$37,253	\$18,627	\$34,165	\$22,583	\$43,165	\$14,599	\$29,199
Total	\$3,676,159	\$4,411,391	\$3,475,199	\$4,170,239	\$3,341,648	\$4,009,978	\$1,904,854	\$3,809,708	\$1,834,149	\$3,668,297	\$1,764,245	\$3,528,491	\$1,682,544	\$3,365,088	\$1,593,510	\$3,187,020	\$1,383,135	\$2,766,270	\$1,432,183	\$2,864,366	\$1,396,530	\$2,793,060	\$1,284,577	\$2,569,153

[illegible]

Fig. 1
Occupancy Tax Collections (1993-2018)

(3% overall collection rate from 1993 - 2001, 5% from 2002 - 2013, and 6% from 2014 forward)

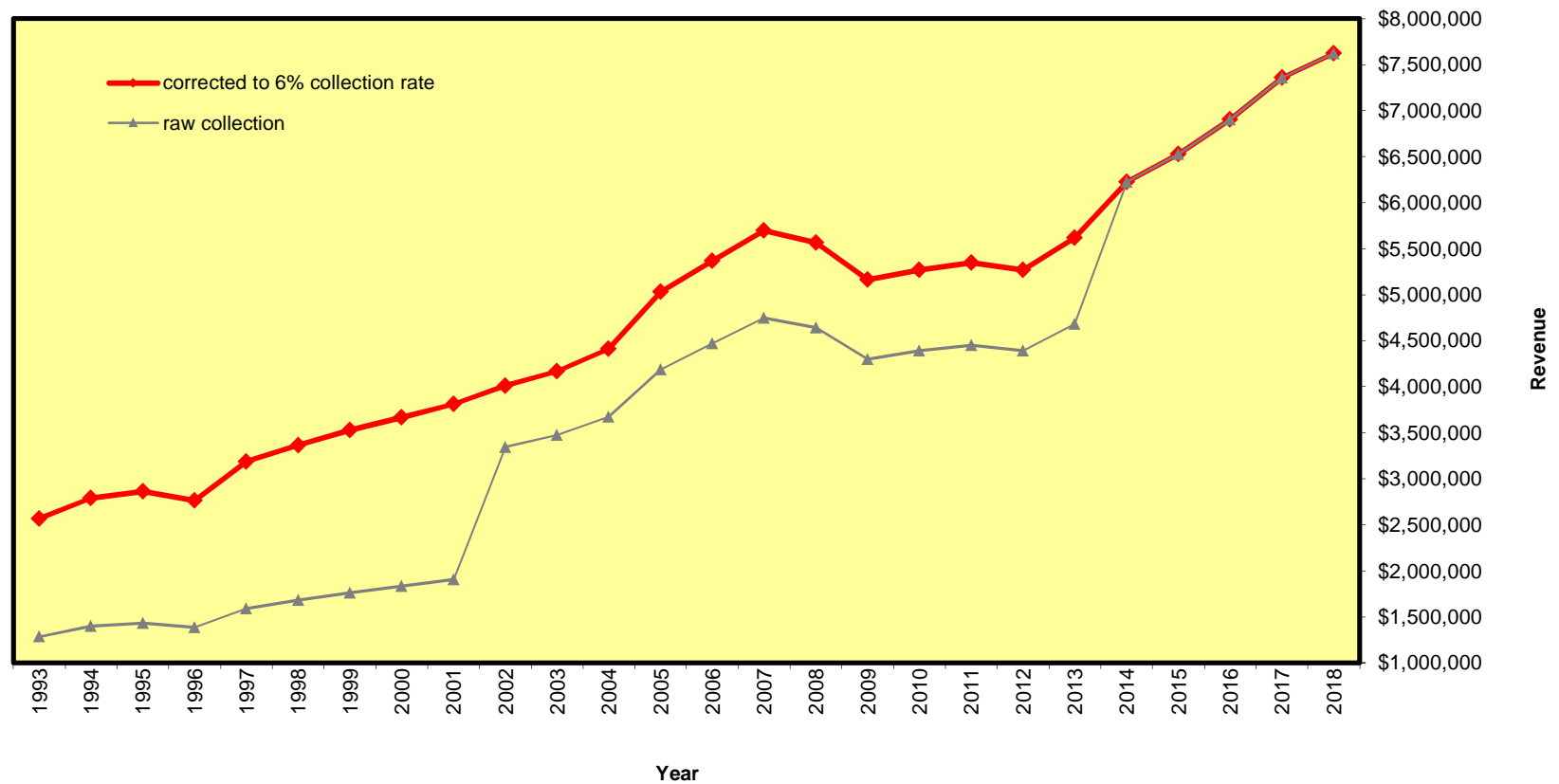


Fig. 2
Percent +/- Compared to Previous Year
Occupancy Tax Collections (1993 - 2018)
(collections corrected to represent the current 6% rate)

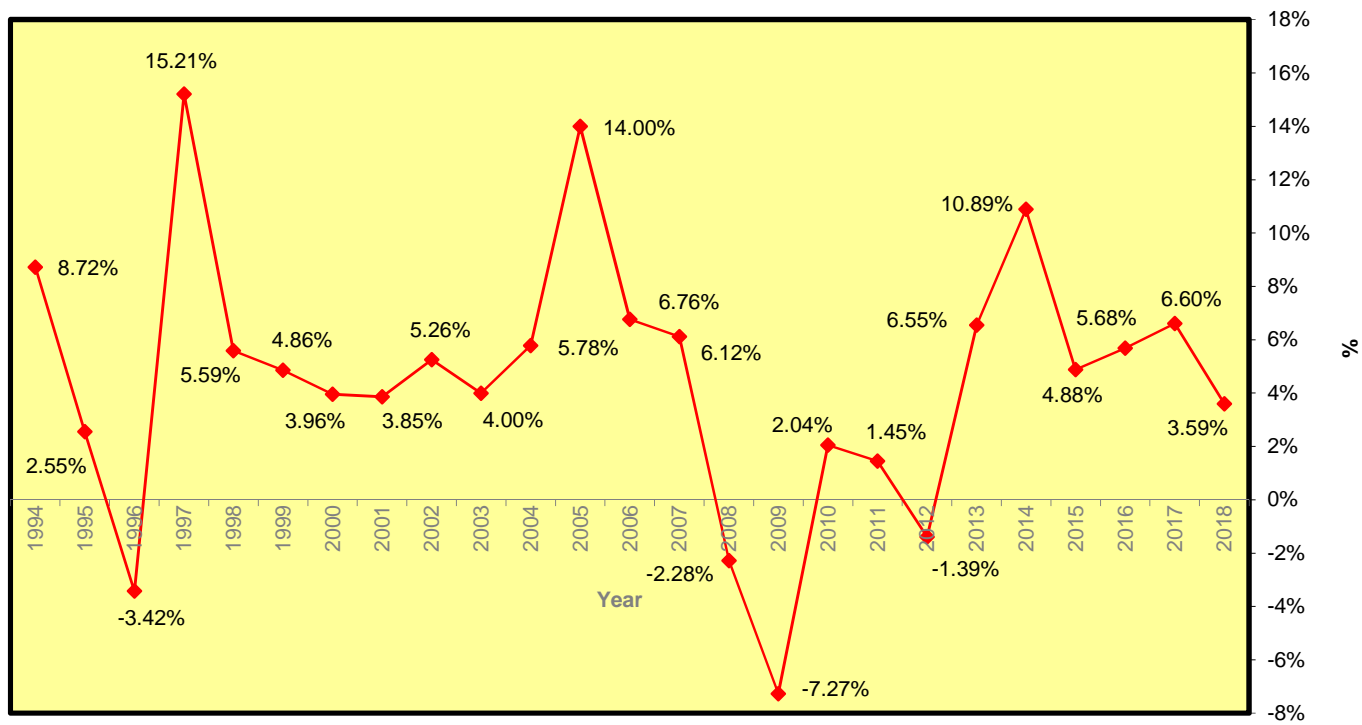
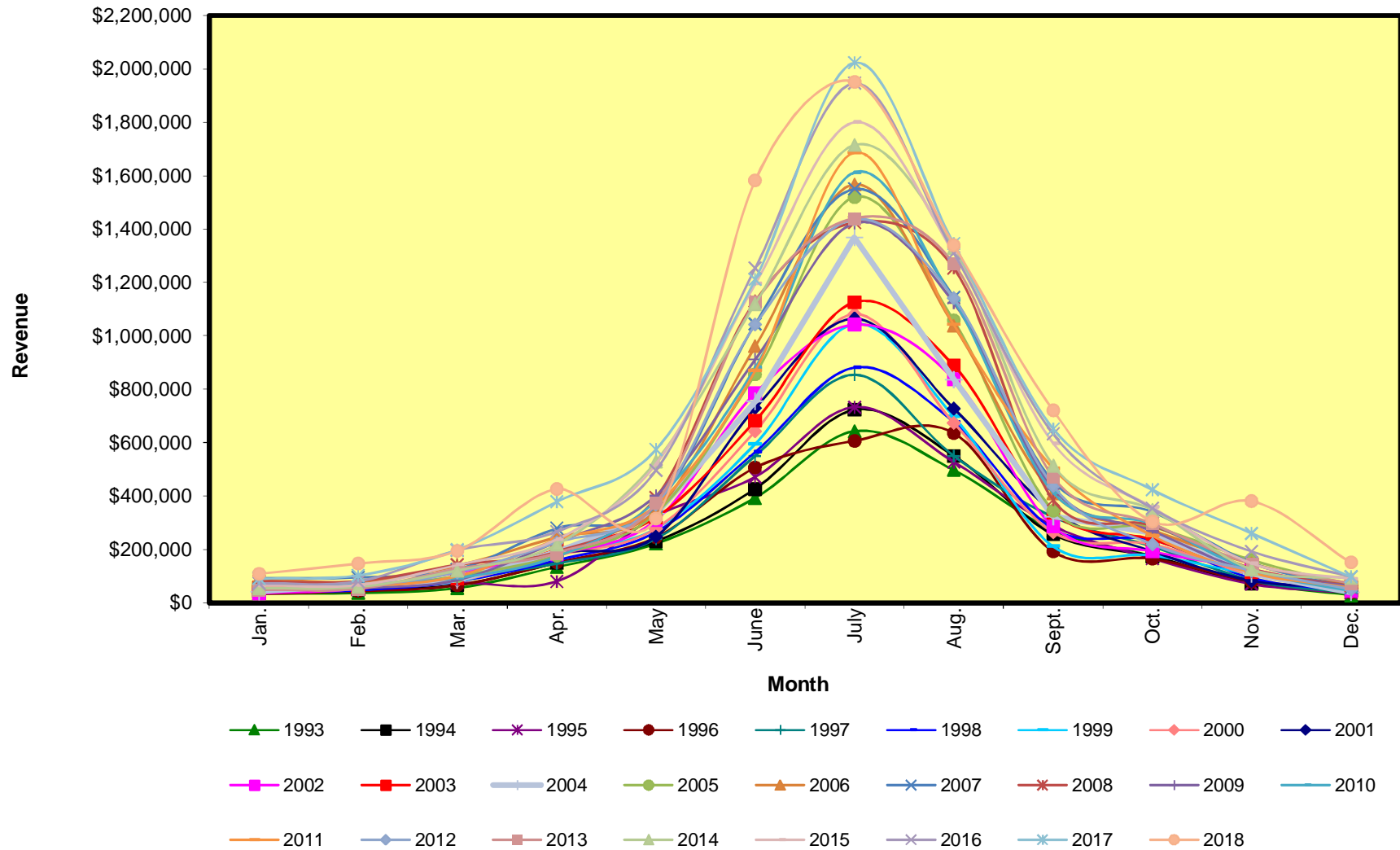


Fig. 3
Monthly Occupancy Tax Collections (1993-2018)
 (collections corrected to represent the current 6% rate)



CARTERET COUNTY
Occupancy Tax Revenues - hotel/motel and condo/cottage sectors
2006 - 2018

(2006 - 2013 corrected to reflect 6% collection rate)

	2018		2017		2016		2015		2014		2013		2012		2011		2010		2009		2008		2007		2006	
	hotel/motel	condo/cottage	hotel/motel	condo/cottage	hotel/motel	condo/cottage	hotel/motel	condo/cottage	hotel/motel	condo/cottage	hotel/motel	condo/cottage	hotel/motel	condo/cottage	hotel/motel	condo/cottage	hotel/motel	condo/cottage	hotel/motel	condo/cottage	hotel/motel	condo/cottage	hotel/motel	condo/cottage	hotel/motel	condo/cottage
Jan.	\$64,220	\$15,587	\$55,046	\$20,548	\$48,036	\$17,091	\$43,682	\$19,059	\$36,806	\$13,724	\$34,983	\$13,947	\$36,768	\$13,722	\$42,834	\$16,485	\$31,111	\$16,904	\$40,990	\$16,632	\$52,660	\$28,121	\$48,913	\$44,512	\$58,083	\$30,081
Feb.	\$75,355	\$41,210	\$68,130	\$16,646	\$58,083	\$13,315	\$49,830	\$14,339	\$47,748	\$9,727	\$40,777	\$12,119	\$47,145	\$15,440	\$48,761	\$13,411	\$59,088	\$10,063	\$46,002	\$9,773	\$68,531	\$12,356	\$75,341	\$19,667	\$58,723	\$20,572
Mar.	\$117,220	\$34,772	\$107,843	\$58,189	\$120,077	\$57,018	\$88,990	\$43,092	\$79,905	\$35,331	\$73,935	\$54,121	\$67,718	\$46,644	\$66,326	\$33,738	\$58,996	\$34,841	\$55,011	\$30,114	\$81,221	\$61,158	\$78,203	\$47,250	\$99,083	\$39,741
Apr.	\$171,013	\$207,589	\$179,497	\$155,100	\$151,969	\$91,052	\$126,112	\$98,108	\$93,984	\$117,344	\$100,184	\$83,023	\$105,057	\$121,225	\$111,838	\$124,637	\$88,012	\$84,913	\$125,610	\$102,589	\$123,809	\$68,229	\$165,425	\$109,998	\$132,469	\$111,703
May	\$164,845	\$115,838	\$230,974	\$285,193	\$201,472	\$241,742	\$186,867	\$301,368	\$226,791	\$277,206	\$129,279	\$235,824	\$145,586	\$220,899	\$159,702	\$205,030	\$166,192	\$215,168	\$179,698	\$221,527	\$170,972	\$220,470	\$179,238	\$181,366	\$172,728	\$168,680
June	\$410,906	\$1,039,338	\$290,456	\$828,899	\$274,709	\$891,044	\$253,445	\$875,737	\$246,285	\$831,770	\$218,550	\$876,988	\$202,130	\$838,529	\$195,565	\$673,351	\$260,966	\$619,117	\$235,064	\$674,524	\$309,460	\$821,330	\$239,237	\$798,702	\$260,188	\$696,709
July	\$365,114	\$1,462,838	\$370,322	\$1,536,111	\$386,888	\$1,433,393	\$303,368	\$1,393,664	\$282,308	\$1,363,209	\$247,416	\$1,167,464	\$218,316	\$1,217,652	\$280,319	\$1,404,340	\$291,156	\$1,318,345	\$270,920	\$1,149,612	\$276,279	\$1,147,818	\$320,453	\$1,228,747	\$308,714	\$1,255,344
Aug.	\$217,643	\$1,046,472	\$274,246	\$986,966	\$276,354	\$942,894	\$238,151	\$1,005,522	\$239,960	\$1,039,049	\$214,129	\$1,038,699	\$163,370	\$975,069	\$172,834	\$867,806	\$215,462	\$917,537	\$202,287	\$921,267	\$234,644	\$1,017,691	\$190,159	\$952,095	\$221,027	\$816,588
Sept.	\$236,742	\$446,022	\$177,382	\$432,336	\$175,505	\$411,402	\$175,842	\$371,473	\$149,430	\$342,512	\$147,647	\$314,001	\$125,966	\$310,630	\$163,025	\$339,269	\$145,718	\$266,896	\$153,365	\$272,550	\$125,024	\$260,551	\$173,523	\$280,497	\$149,508	\$261,047
Oct.	\$147,923	\$118,172	\$194,831	\$198,533	\$159,004	\$174,718	\$140,861	\$188,949	\$162,410	\$169,089	\$121,688	\$147,677	\$82,029	\$137,506	\$108,098	\$143,478	\$135,957	\$159,242	\$128,447	\$140,036	\$144,494	\$144,948	\$208,237	\$132,301	\$152,588	\$119,764
Nov.	\$129,778	\$225,997	\$94,295	\$91,458	\$103,515	\$69,622	\$77,759	\$59,516	\$55,978	\$62,758	\$67,792	\$57,052	\$61,747	\$58,971	\$55,958	\$56,590	\$67,216	\$54,046	\$64,226	\$52,056	\$71,061	\$57,815	\$88,324	\$60,515	\$77,799	\$68,215
Dec.	\$92,243	\$38,797	\$57,487	\$28,719	\$60,232	\$28,674	\$53,696	\$29,620	\$57,894	\$27,793	\$40,978	\$28,671	\$26,707	\$24,487	\$34,241	\$22,346	\$22,701	\$22,191	\$38,685	\$23,453	\$40,751	\$22,214	\$33,860	\$23,537	\$39,380	\$31,748
Total	\$2,193,002	\$4,792,632	\$2,100,510	\$4,638,698	\$2,015,844	\$4,371,963	\$1,738,602	\$4,400,445	\$1,679,499	\$4,289,513	\$1,437,358	\$4,029,585	\$1,282,541	\$3,980,774	\$1,439,500	\$3,900,480	\$1,542,575	\$3,719,264	\$1,540,305	\$3,614,133	\$1,698,906	\$3,862,701	\$1,800,913	\$3,879,186	\$1,730,291	\$3,620,191
% (+/-) previous year	4.40%	3.32%	4.20%	6.10%	15.95%	-0.65%	3.52%	2.59%	16.85%	6.45%	12.07%	1.23%	-10.90%	2.06%	-6.68%	4.87%	0.15%	2.91%	-9.34%	-6.44%	-5.66%	-0.42%	4.08%	7.15%		

% (+/-) Annual avg. over 12 years (hotel/motel) 2.39%
% (+/-) Annual avg. over 12 years (condo/cottage) 2.43%

% (+/-) 2018 compared to 2006 only (hotel/motel) 26.74%
% (+/-) 2018 compared to 2006 only (condo/cottage) 32.39%

Fig. 1
Occupancy Tax Collections (2006-2018)
(hotel/motel and condo/cottage sectors)

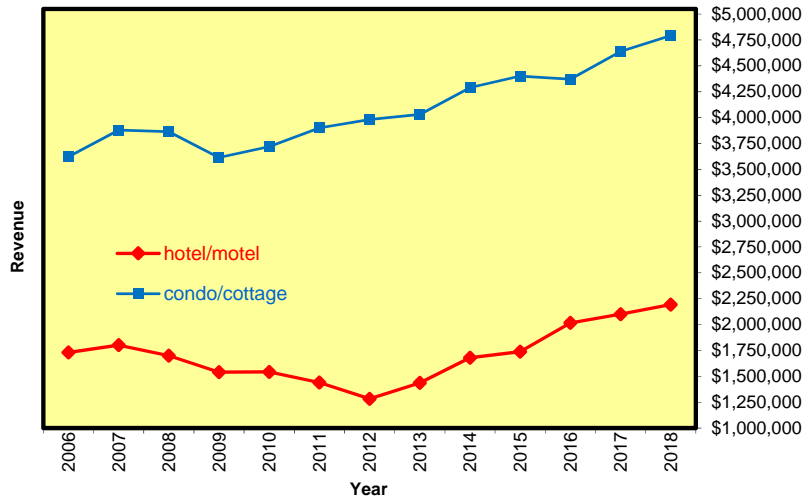


Fig. 2
Percent +/- Compared to Previous Year
Occupancy Tax Collections (2006-2018)
(hotel/motel and condo/cottage sectors)

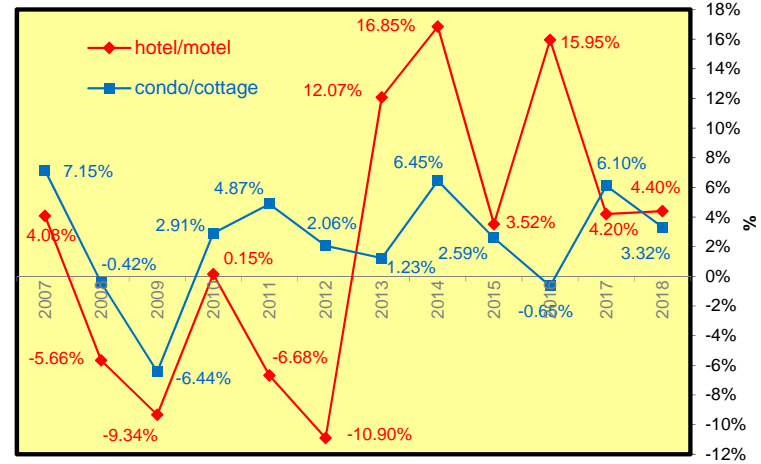


Fig. 3
Monthly Occupancy Tax Collections (2006-2018)
(hotel/motel sector)

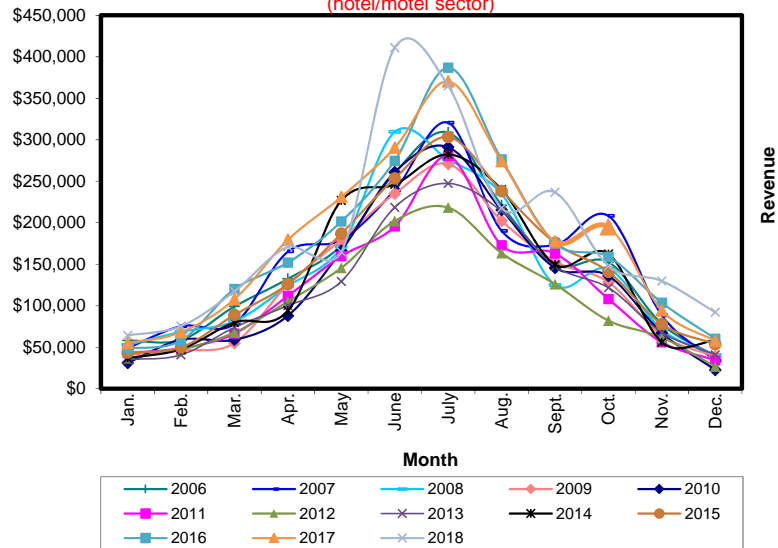
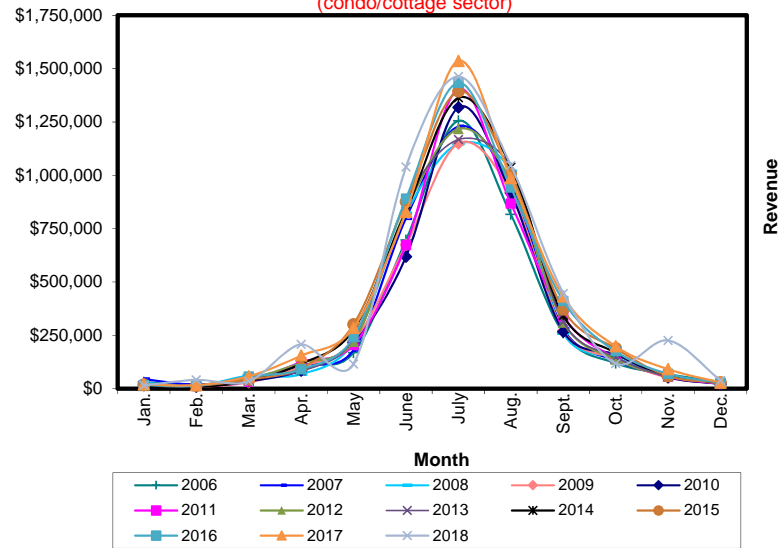
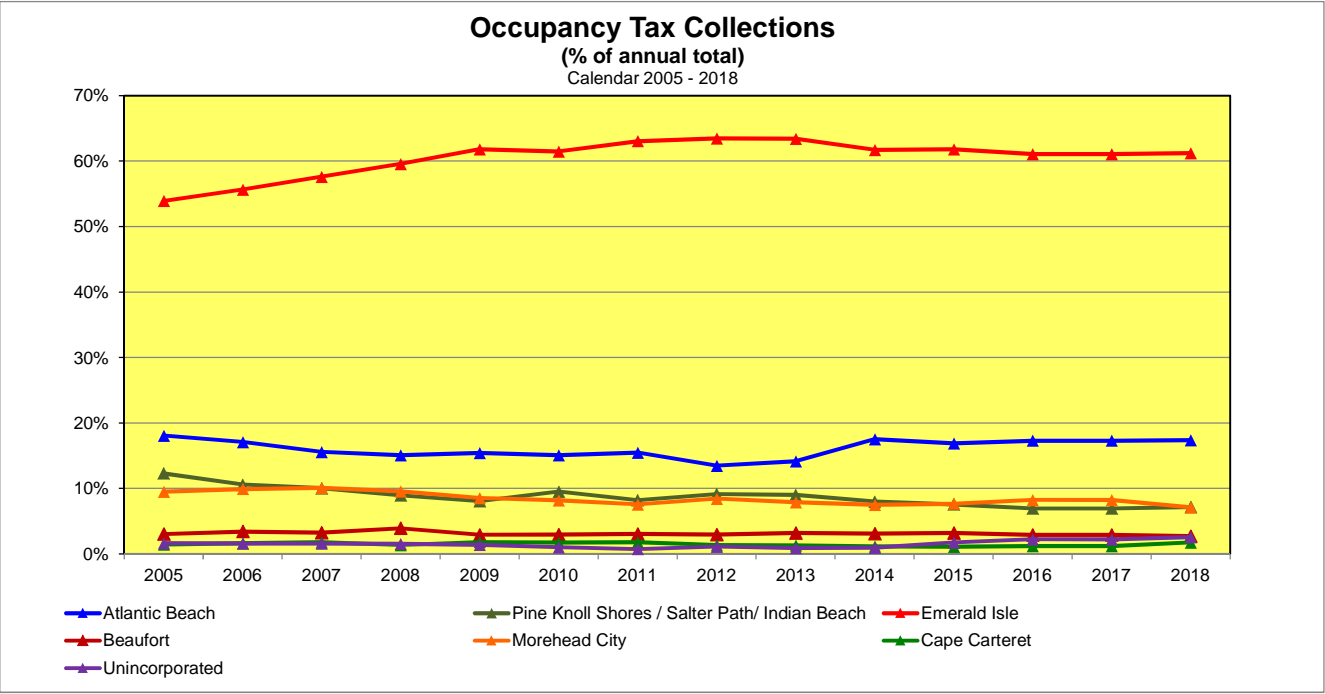


Fig. 4
Monthly Occupancy Tax Collections (2006-2018)
(condo/cottage sector)



Property	2005 Collections (5% rate)		2006 Collections (5% rate)		2007 Collections (5% rate)		2008 Collections (5% rate)		2009 Collections (5% rate)		2010 Collections (5% rate)		2011 Collections (5% rate)		2012 Collections (5% rate)		2013 Collections (5% rate)		2014 Collections (6% rate)	
Atlantic Beach	\$742,592	18%	\$765,111	17%	\$736,098	16%	\$701,096	15%	\$654,191	15%	\$654,234	15%	\$683,552	16%	\$599,127	13%	\$656,184	14%	\$1,092,535	18%
Pine Knoll Shores / Salter Path/ Indian Beach	\$505,238	12%	\$473,142	11%	\$474,476	10%	\$415,640	9%	\$341,345	8%	\$412,223	10%	\$362,465	8%	\$405,481	9%	\$417,192	9%	\$498,611	8%
Emerald Isle	\$2,214,669	54%	\$2,488,408	56%	\$2,722,625	58%	\$2,770,525	60%	\$2,617,239	62%	\$2,667,355	61%	\$2,780,992	63%	\$2,818,859	63%	\$2,935,918	63%	\$3,848,965	62%
Beaufort	\$125,065	3%	\$153,645	3%	\$154,978	3%	\$182,835	4%	\$123,936	3%	\$129,233	3%	\$135,866	3%	\$132,642	3%	\$147,938	3%	\$195,394	3%
Morehead City	\$390,174	10%	\$444,345	10%	\$477,424	10%	\$445,552	10%	\$360,834	9%	\$355,876	8%	\$334,175	8%	\$374,617	8%	\$365,776	8%	\$468,985	8%
Cape Carteret	\$59,839	1%	\$74,318	2%	\$84,929	2%	\$63,566	1%	\$76,968	2%	\$74,948	2%	\$79,369	2%	\$61,056	1%	\$60,536	1%	\$71,902	1%
Unincorporated	\$68,233	2%	\$71,976	2%	\$76,214	2%	\$71,395	2%	\$59,412	1%	\$43,734	1%	\$32,962	1%	\$48,706	1%	\$43,124	1%	\$60,281	1%
TOTAL	\$4,105,809	100%	\$4,470,944	100%	\$4,726,744	100%	\$4,650,608	100%	\$4,233,925	100%	\$4,337,603	100%	\$4,409,380	100%	\$4,440,487	100%	\$4,626,668	100%	\$6,236,674	100%

Property	2015 Collections (6% rate)		2016 Collections (6% rate)		2017 Collections (6% rate)		2018 Collections (6% rate)		TOTAL	
Atlantic Beach	\$1,094,467	17%	\$1,180,492	17%	\$1,215,196	17%	\$1,276,771	17%	\$12,051,646	16%
Pine Knoll Shores / Salter Path/ Indian Beach	\$490,115	8%	\$474,467	7%	\$519,402	7%	\$527,542	7%	\$6,317,339	9%
Emerald Isle	\$4,005,798	62%	\$4,164,240	61%	\$4,355,962	61%	\$4,493,980	61%	\$44,885,535	61%
Beaufort	\$207,260	3%	\$200,497	3%	\$212,025	3%	\$200,569	3%	\$2,301,883	3%
Morehead City	\$498,097	8%	\$562,155	8%	\$548,264	8%	\$522,894	7%	\$6,149,168	8%
Cape Carteret	\$71,608	1%	\$83,036	1%	\$108,691	2%	\$129,378	2%	\$1,100,144	1%
Unincorporated	\$112,198	2%	\$152,886	2%	\$232,223	3%	\$188,414	3%	\$1,261,756	2%
TOTAL	\$6,479,542	100%	\$6,817,772	100%	\$7,191,764	100%	\$7,339,549	100%	\$74,067,470	100%



Notes:

(a) The collection value represents the location of the reporting office only, and my not be 100% correlative to the actual lodging location.

(b) The locations listed as "Unincorporated" are collectors not located in a municipality.

(c) In 2016, on-line collections begun to be recorded but are not attributable to any municipality and therefore are not reflected in the graph.

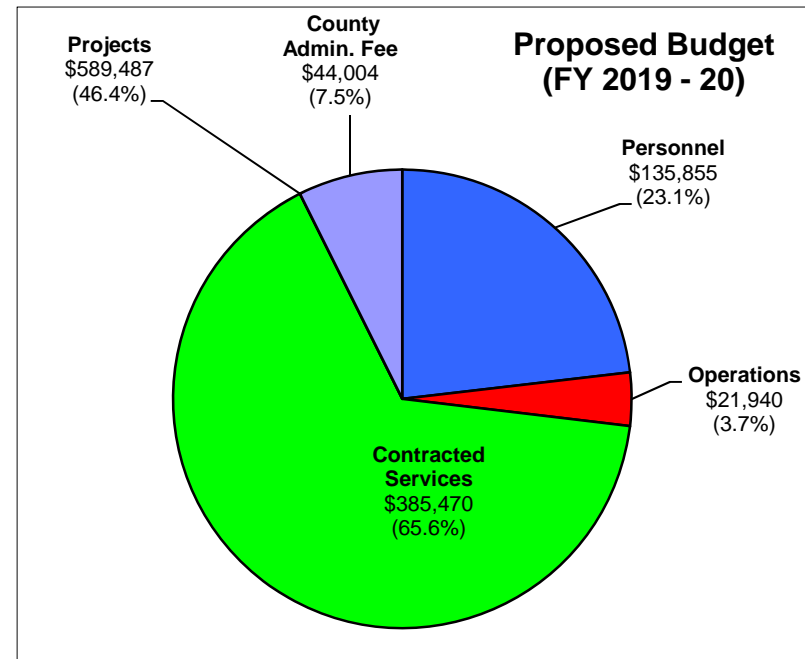
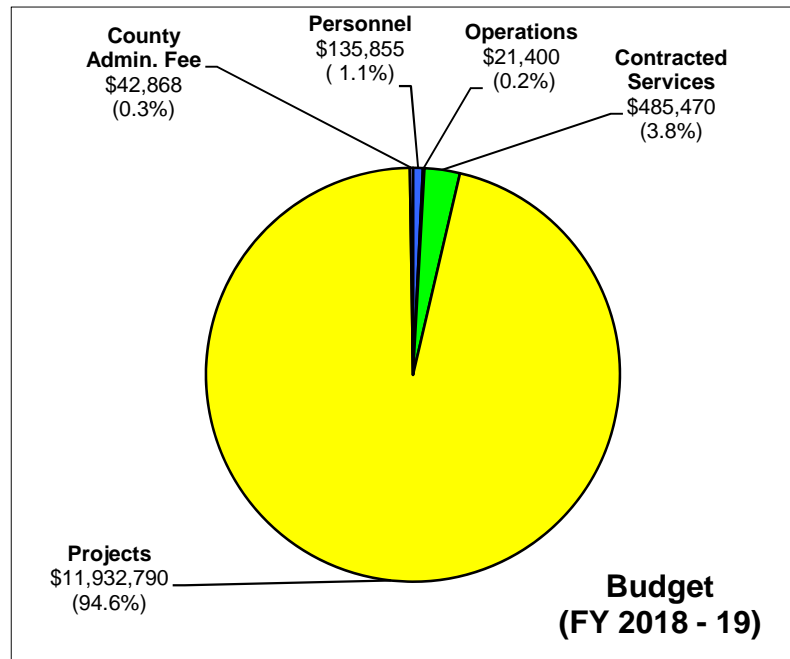
(3) Proposed FY 2019-20 budget.

- (a)** A ***spreadsheet*** presenting the proposed FY 2019-20 budget for the Shore Protection Office comparing each line item in the proposed budget to those in our current fiscal year (FY 2018-19).
- (b)** An accompanying sheet including two ***pie diagrams*** summarizing the percent allocation of the proposed expenditures detailed in the recommended FY 2019-20 and our current FY 2018-19 budget.
- (c)** Detailed expenditure justification ***narrative*** for each line item proposed in the FY 2019-20 budget.

**SHORE PROTECTION OFFICE
PROPOSED BUDGET (FY 19-20)**

Line Item		FY 18-19 amended	FY 19-20 proposed	FY 19-20 compared to FY 18-19 Difference (%)	FY 19-20 compared to FY 18-19 Difference (\$)	Explanations for FY 19-20 budget
	OPENING FUND BALANCE	\$18,631,010	\$10,137,537			
	REVENUES					
1	Occupancy Tax (projected)	\$3,786,758	\$3,824,626	1.00%	\$37,868	FY 19-20 includes a +1% growth rate (counter balancing impacts from hurricane <i>Florence</i> Pursuant to S.L. 2013-223, the overall collection rate is 6% with 50% of the collection attributed to the nourishment reserve.
2	Interest on Reserve & FY Revenues/Expenditures (x 0.01)	\$164,665	\$109,471	-33.52%	(\$55,194)	
3	110.40.3490.300 NC Water Resources Fund for (Feasibility Study & Other)	\$5,173,487	\$0	-100.00%	(\$5,173,487)	FY 2018-09 = \$173,487 \$50% State Reimbursement for PED Project + \$5 million for Post <i>Florence</i> Renourishment Project per S.L. 2018-5.
4	Total Revenues	\$9,124,910	\$3,934,096	-56.89%	(\$5,190,813)	
	EXPENDITURES					
	Account Description					
5	110.40.4901.12100 Salaries	\$103,595	\$103,595	0.00%	\$0	Represents base annual salary of \$103,595 for one employee in FY 2018-19 with no increase or bonus for FY 2019-20.
6	110.40.4901.18100 FICA	\$7,925	\$7,925	0.00%	\$0	
7	110.40.4901.18200 Retirement Contribution	\$8,135	\$8,135	0.00%	\$0	Best guess based on historical values/formulas.
8	110.40.4901.18300 Medical Insurance	\$9,020	\$9,020	0.00%	\$0	
9	110.40.4901.18600 Workman's Comp	\$2,000	\$2,000	0.00%	\$0	
10	110.40.4901.18700 401K	\$5,180	\$5,180	0.00%	\$0	
11	110.40.4901.20000 Supplies	\$2,000	\$2,000	0.00%	\$0	Baseline value for copier paper, printer ink, etc.
12	110.40.4901.28000 Small Equipment	\$2,000	\$2,000	0.00%	\$0	Contingency value for any unforeseen replacements (i.e., printer, copier, laptop, etc.).
13	110.40.4901.31400 In-County Travel	\$2,400	\$2,400	0.00%	\$0	Mileage reimbursement based on IRS rate
14	110.40.4901.32100 Telephone	\$3,120	\$3,660	17.32%	\$540	Baseline value for internet, modem, cell phone, etc.
15	110.40.4901.32500 Postage	\$1,000	\$1,000	0.00%	\$0	Baseline value for mailings, PO Box, etc.
16	110.40.4901.39500 Out-of-County Travel	\$5,880	\$5,880	0.00%	\$0	
17	110.40.4901.44000 Contracted Services	\$485,470	\$385,470	-20.60%	(\$100,000)	\$289,850 Beach Monitoring (\$155,050 year + \$119,800 storm if needed, Bogue Inlet \$15,000); \$50,000 Legal Fees (Kilpatrick Townsend); \$20,000 Moffatt & Nichol; \$7,500 Internet Mapping Website; \$15,000 for Master Nourishment Plan; \$3,120 for Office Cleaning.
18	110.40.4901.49100 Dues and Subscriptions	\$5,000	\$5,000	0.00%	\$0	\$2,500 NCBWA; \$250 JCR; \$1,250 ASBPA, \$1,000 E&E Publishing.
19	110.98.9800.90008 Post <i>Florence</i> Nourishment	\$16,932,790	\$0	0.00%	(\$16,932,790)	Total Phase I Project is \$20,910,385. \$5 million State funding apportioned based upon volume of sand received. Remaining non-State portion split 75% Nourishment Reserve (\$11,932,790 & 25% municipality (Emerald Isle, Indian Beach, & Salter Path).
20	290.40.4230.69901 County Occupancy Tax Administration Fee (50%)	\$42,868	\$43,246	0.88%	\$379	The County's Administration fee for the occupancy tax is up to 3% of first \$500,000 of gross proceeds and 1% of remaining gross receipts collected each year. The Beach Fund reserve realizes 50% of this expense, i.e., 50% of the total 6% occupancy tax.
21	Total Expenditures	\$17,618,383	\$586,512	-96.67%	(\$17,031,871)	
22	(Deficit)/Surplus for Year	(\$8,493,473)	\$3,347,585	-139.41%	\$11,841,058	
	ENDING FUND BALANCE					
23	110.00.3990.990	\$10,137,537	\$13,485,121	33.02%	\$3,347,585	
	EXPENDITURE SUMMARY	FY 18-19	FY 19-20	FY 19-20 compared to FY 18-19 Difference (%)	FY 19-20 compared to FY 18-19 Difference (\$)	
	Personnel (line items 5, 6, 7, 8, 9 & 10)	\$135,855	\$135,855	0.00%	\$0	
	Operations (line items 11, 12, 13, 14, 15, 16, & 18)	\$21,400	\$21,940	2.52%	\$540	
	Contracted Services (line item 17)	\$485,470	\$385,470	-20.60%	(\$100,000)	
	Projects (line item 19)	\$16,932,790	\$0	-100.00%	(\$16,932,790)	
	County Admin Fee (line item 20)	\$42,868	\$43,246	0.88%	\$379	
	Total Expenditures (line items 5 - 20, or line item 21)	\$17,618,383	\$586,512	-96.67%	(\$17,031,871)	
	less "Projects" (line items 5 - 18, and 20.)	\$685,593	\$586,512	-14.45%	(\$99,081)	

SHORE PROTECTION OFFICE
Expenditure Summary
FY 2018-19 (amended) and FY 2019-20 (proposed)



SHORE PROTECTION OFFICE (SPO) EXPENDITURE LINE ITEM JUSTIFICATION
FOR PERSONNEL, OPERATIONS, & CONTRACTED SERVICES

PERSONNEL (\$135,855)

4901.12100 – Salary (\$103,595)

4901.18100 – FICA (\$7,925)

4901.18200 – Retirement (\$8,135)

4901.18300 – Medical Insurance (\$9,020)

4901.18700 – 401K (\$5,180)

The salary, taxes, and benefits figures are for one employee (Shore Protection Manager) using FICA and benefit rates directed by the County's Finance Department. The proposed salary figure is the same as the current fiscal year (FY 2018-19).

OPERATIONS (\$21,940)

4901.20000 - Supplies (\$2,000)

Includes supplies necessary for daily operations - proposed budget amounts are based upon historical uses where applicable and includes the following. No anticipated increase.

- 1) Nine color cartridges @ \$100/each for printer & copier machine (3 replacements for the year) – HP Laser Jet 500 color includes magenta, cyan, and yellow. **(\$900)**
 - 2) Four black cartridges for printer & copier machine @ \$100 each. **(\$400)**
 - 3) Miscellaneous – repairs, copy paper, envelopes, staples, etc. **(\$700)**
- Total = **\$2,000**

4901.28000 - Small Equipment (\$2,000)

Includes annual "contingency" costs associated with servicing small equipment (copier, digital camera, etc.), unforeseen repairs, and the purchase of other office-related items (file cabinets, shelving, etc.).

- 1) Miscellaneous – servicing equipment, repairs, miscellaneous (file cabinets, shelving, etc.). **(\$2,000)**
- Total = **\$2,000**

4901.32100 – Telephone (\$3,660)

This total includes costs for the SPO phone and fax lines, cell phone, and the cost for digital cable (internet access/static IP). As a satellite office, the main methodology of contact with the general public, County administration, municipal officials, and governmental agencies is the internet and associated "remote" technologies (i.e., server, modem, etc.). Costs presented below are based upon historical uses and charges.

- 1) Time Warner Cable – internet @ \$175 per month. **(\$2,100)**
 - 2) Verizon - Cell Phone @ \$130 per month. **(\$1,550)**
- Total = **\$3,660**

4901.32500 – Postage (\$1,000)

The proposed line item amount is based upon historical expenditures and is utilized to secure a P.O. Box, mail correspondences, packages, monitoring reports, Beach Commission agenda packets, and other mass mailings.

Total = **\$1,000**

4901.39500 and 4901.31400 – Travel (\$5,880 Out of County & \$2,400 In County, respectively)

A \$5,720 increase to the travel line item was proposed and approved for the FY 2016-17 budget to accommodate the new Governmental Affairs Officer (GAO) position that was envisioned to require extensive travel to Raleigh to monitor and educate the N.C General Assembly during the conclusion of the 2016 “short” session and the front half of the 2017 “long” session. The GAO’s local travel expense would likely include mandatory attendance requirements as well at meetings such as that of the County Board, local municipalities, Economic Development Council, Chamber of Commerce, civic groups, etc. However, our GAO had to prematurely retire on permanent disability effective October 31, 2016 and this position will likely remain vacant as the Beach Commission and County leadership continues to reassess the position as a whole. Accordingly the decrease presented in the FY 2018-19 budget for travel was a reflection of this series of events and continues for FY 2019-20, and is also based on an analysis of past proposed budgets vs. actually expended travel costs.

From a historical perspective, five years ago (FY 2014-15), there was a roughly \$1,000 reduction in this budget line item compared to FY 2013-14 that followed a \$4,840 reduction in FY 2012-13 (compared to FY 2011-12), which both correlated to fewer trips required to Washington, D.C. – specifically the cost associated with attending the Annual American Shore & Beach Preservation Association Summit in FY 2012-13. Also, the congressional earmark process has undergone many changes in the past few years and the continued “ban” on earmarks has muted our need to pursue these types of funding mechanisms, and hence fewer trips to Washington, D.C. for the Shore Protection Manager and a member or two from the Beach Commission. However there is still a necessity to travel to Washington to discuss our beach and waterway project funding, and becoming perhaps more important as evidenced by trips taken the past few fiscal years; regulatory and endangered species issues are coming more into forefront. These issues enable local projects to move forward and have tangentially-related impacts as well (e.g., public access, fisheries, energy exploration, sea-level rise, etc.). Although nothing is specifically planned for FY 2019-20, there is a contingency cost presented if the need arises.

Otherwise, the projected local travel expenses included in this line item pertain to traveling to the U.S. Army Corps of Engineers District Office in Wilmington, Coastal Resource Commission (CRC) meetings, CRC Science Panel Meetings, the General Assembly in Raleigh, stakeholder meetings, and miscellaneous trips to other beaches. These trips serve as important tools for establishing and lobbying for legislative agendas, federal and State funding for our beach restoration and waterway dredging projects, and provides insight into potential problems and solutions that other beach communities have experienced in their shore protection efforts. The proposed conferences included in the FY 2019-20 budget provide opportunities to achieve the objectives explained above – advocacy and the transfer of practical experience to the Carteret County SPO. The annual conferences listed in this line item have been regularly attended by the SPO/Beach Commission for well over a decade (FY 02 – 19). Conference costs usually include expenses for the Shore Protection Manager and one or two members of the Beach Commission. Another

cost represented below is a lunch for the Marine Science Education Partnership (MSEP). The membership of MSEP includes the SPO and there is a rotating monthly meeting where each member serves as host and provides lunch for the group.

- 1) One "contingency" trip to Washington D.C. @ \$1,300 per trip for two persons including meals, lodging, and traveling. Trip cost based on actual cost incurred in FY 13-14. **(\$1,300)**
- 2) Annual American Shore & Beach Preservation Association's 2018 Fall Technical Conference in Myrtle Beach, S.C. (Oct. 22nd – October 25th) for two persons including registration cost, meals, lodging, and travel (assume mileage of \$400, lodging 3 nights is \$1,000, conference registration \$740, and meals - \$520). **(\$2,660)**
- 3) Miscellaneous Travel SPO – includes overnight travel associated with Coastal Resources Commission meetings, and other State government meetings (e.g., N.C. Beach, Inlet, & Waterways Association meetings/conferences, Oil & Gas Leasing presentations, visiting the General Assembly, Sea-level rise forums, Flood insurance Rate Map meetings, etc.). **(\$1,700)**
- 4) Marine Science Education Partnership lunch estimated at \$10 per 22 persons – max. **(\$220)**
- 5) Local travel @ \$200 per month for SPO – reimbursement is \$0.58/mile for 2019 (average 345 miles/month). **(\$2,400)**

(1 – 4) Out-of-County Travel. (\$5,880)

(5) In-County Travel. (\$2,400)

Total = \$8,280

4901.49100 – Dues and Subscriptions (\$5,000)

Dues to the N.C. Beach, Inlet, & Waterway Association (NCBIWA), and the American Shore and Beach Preservation Association (ASBPA) provide a strong lobbying vehicle to push for beach restoration strategies that are beneficial to Carteret County, and both organizations provide literature the SPO can disseminate to the public and the Beach Commission. Also, although NCBIWA's chief mission is related to shore protection; this organization provides information/support for other coastal issues that benefit County government and the public as well including matters related to insurance issues, the National Flood Insurance Program, water quality/stormwater rules, the implementation of the Coastal Area Management Act (CAMA), etc. The SPO is a member of the aforementioned organizations for FY 18-19 and in previous years, and the Shore Protection Manager was formally on the Board of Directors for the ASBPA. The Journal of Coastal Research is a publication that serves as both a technical and policy resource that reports issues related to the County's beach restoration efforts. And lastly the subscription to Environment & Energy Publishing was started in FY 2015-16 and allows access to a suite of publications pertaining to federal matters including; "EnergyWire", "ClimateWire", "E&E daily", "Greenwire", and "E&E News PM". Most of the publications are released daily and helps the SPO/County monitor the latest developments from the President's Administration & federal agencies, Congress as a whole and all their committees, and National lawsuits that could impact federal policy. The SPO negotiated a deeply discounted rate = \$1,000 compared to \$18,000.

- 1) NCBIWA. **(\$2,500)**
 - 2) ASBPA. **(\$1,250)**
 - 3) Journal of Coastal Research. **(\$250)**
 - 4) Environment & Energy Publishing Suite. **(\$1,000)**
- Total = \$5,000**

CONTRACTED SERVICES (\$385,470)

4901.44000 – Contracted Services (\$385,470)

There are six (6) components of contracted services justifying the proposed line item expense for FY 2019-20 resulting in a -21% decrease (-\$100,000), which stems from a large reduction in our Master Plan costs as the planning/permitting phase reaches conclusion complimented by a reduction in our legal retainer.

(1) Beach Surveying (\$289,850). In 2018 a new 5-year contract extension for the annual beach surveying program was executed including a fixed annual cost of \$155,050 for annual activities along Bogue Banks, Shackleford Banks, and Bear Island (164 profiles) AND \$119,800 for a contingency, “on-call” Bogue Banks only post-storm survey (122 profiles) totaling \$274,850. The current monitoring contract extension (2018 – 2022) also includes a new a more full coverage, concentrated survey of the Bogue Banks “hot spots” located in east Emerald Isle and Pine Knoll Shores utilizing a mobile laser scanner along a topographic stretch from central Emerald Isle to west Atlantic Beach incorporating 56 profiles. The laser scanner can be considered as a swath acquisition system, obtaining millions of elevation data points per survey event between profiles (topography only). The hot spot reach is surveyed (laser scanned) twice per year – once during routine annual surveying activities before the hurricane season and once after hurricane season. The general goals of the hot spot analysis are; (1) to constrain the specific geographic area of the hot spots, (2) augment other data to determine what might causing the hot spots, and (3) most importantly, use this information to design more effective nourishment projects.

Also included under the “beach surveying” constituent of contracted services is a semi-annual survey of Bogue Inlet utilizing the firm of Geodynamics. The surveys include full topo- and swath bathymetric coverage of “the Point” in Emerald Isle and the adjacent channel and shoal complex related to Bogue Inlet. A small Powerpoint/pdf type report is subsequently generated/updated for each event. The survey and report are prepared and delivered at a deeply discounted rate because of the flexibility afforded by the self-determined survey window, and Geodynamics’ community discount applied to the effort. Surveys are conducted near June and November each year for \$7,500/event or \$15,000 for the year. A major feature of the Bogue Banks Master Plan is a Bogue Inlet “safe box” whereby a channel realignment event will be triggered once the channel itself migrates beyond the safe box and therefore closer to the Point. These semi-annual surveys are used to monitor how close the channel is to the safe box, and the footprint of the safe box was developed via a channel morphology and hydraulic assessment conducted as part of the Master Plan. The \$15,000 hi-resolution Bogue Inlet coupled with \$274,850 anticipated annual survey cost (includes the contingency post-storm survey and new full-coverage hot spot topographic laser scanning project) equates to a \$289,850 total expenditure estimate.

(2) Legal Counsel (\$50,000). The 2008 legal settlement reached between the County and the U.S. Corps of Engineers concerning dredged material management issues at the Morehead City Harbor included the preparation of a Dredged Material Management Plan (DMMP) by October 2011. However, the National Park Service (NPS) interjected in 2010 by requesting the “right of first refusal” to 40% of the sand that has traditionally gone to Bogue Banks to begin to be placed on the NPS property of Shackleford Banks. The NPS also became a cooperating agency with the Corps and the Draft DMMP was released in the last quarter of 2013. The draft DMMP included beach nourishment on Shackleford Banks and did not include a mechanism to allow the local governments to participate financially or administratively in “delta” projects

whereby dredged sand planned to be disposed offshore in year 2 and 3 of the recurring 3-year cycle could be utilized for beach nourishment. However we successfully lobbied the NPS to ask the Corps of Engineers to eliminate the beach nourishment option (June 2014); which also took intense legal consultation, including seed funding for the “KeepShackWild.com” effort.

Since 2006, roughly \$1,050,767 of attorney fees have been accumulated as of the end of calendar 2018, but this total also includes the seed money for “KeepShackWild.com” and related issues as described above (~\$81,000) and legal counsel concerning both the proposed loggerhead critical habitat designation and red-knot rufa shorebird listing that was cost-shared with New Hanover County, Oak Island, Caswell Beach, and Holden Beach (~\$31,000 to date). When “KeepShackWild” (~\$81,000), endangered species (~\$31,000), and other issues such as oil/gas exploration, etc. (~\$25,500) are considered, roughly \$137,859 of the \$1,050,767 mentioned above are related to more tangential issues than those solely attributed to the Morehead City Harbor.

We budgeted \$150,000 for FY 2015-16 anticipating some legal services would be required for the Bureau of Ocean Energy Management’s release of the 2017-2022 Draft Oil & Gas Leasing Program, but the legal interface was not as intense as expected. In FY 2017-18 and FY 2018-19 we budgeted \$75,000, which provided budget accommodation space to extensively utilize legal counsel to formulate our response and work with the State in regards to the Corps of Engineers scoping request and consequent Draft Environmental Assessment concerning realigning the Morehead City Harbor Channel in an effort to avoid shoaling along the east (Shackleford Banks) side of the fixed channel. Legal counsel was also used for Memorandum of Agreement (MOA) issues between Atlantic Beach and the Corps for potential sand placement along Bogue Banks.

A reduction from \$75,000 to \$50,000 is proposed for legal counsel in FY 2019-20 based upon historic utilization rates. However, the Shore Protection Office foresees issues such as the recent Morehead City Harbor channel realignment project, the Corps of Engineers continued reliance on utilizing the ODMDS as a disposal site rather than the nearshore berm(s), and potential MOA negotiations for the next Atlantic Beach nourishment event as pressing issues that will likely entail intense legal counsel and the preparation of formal responses. Note: Retainer for FY 2016-17 was \$125,000 and reduced to \$75,000 in FY 2017-18 and 18-19.

(3) Miscellaneous Engineering Services (\$20,000). Moffatt & Nichol is considered as our project engineer for all issues/correspondences concerning dredging at the Morehead City Harbor (e.g., DMMP, channel realignment response, etc.), or other issues that pertain to dredging/beach nourishment within the County (e.g., the Beneficial Use of Dredged Material Pilot Program, waterway permitting, County dredge white paper, FIRM mapping, etc.). \$20,000 is estimated as a retainer/contingency cost for FY 2019-20 (same as previous years). This retainer amount is contractually included as an option within our executed Master Nourishment Plan contract with Moffatt & Nichol (see “5” below).

(4) Mapping Website – www.protectthebeachmaps.com (\$7,500). \$7,500 of the contracted services budget is for our internet mapping maintenance fee with Geodynamics, LLC for web-hosting, updating, and trouble-shooting the website www.protectthebeachmaps.com. The site is updated with new data layers each year as part of the annual stipend including items such as new shorelines from our monitoring program, updated parcel information, new aerial photography, etc. In December 2012 the site was upgraded from the ArcGIS to ArcServer platform, and in 2018 www.protectthebeachmaps.com undergone

a large-scale redesign; including new “swipe” features, a “point and click” historical beach profile option, and more.

(5) Master Nourishment Plan. (\$15,000). The Bogue Banks Master Nourishment Plan has resulted in a 50-year nourishment/shore protection plan for the entire island of Bogue Banks and includes the preparation of a Programmatic Environmental Impact Statement (PEIS). The latter (PEIS) will function as the “one-stop” permitting vehicle for the duration of the project and an agreement with Moffatt & Nichol was signed in January 2010 for a not-to-exceed cost of ~\$1.7 million for this effort. The contract has undergone two amendments since - (1) to help facilitate the physical sand search component for both the Master Plan and an interim Emerald Isle Hot-Spot Project that ultimately became the Post-*Irene* Renourishment Project, and (2) unanticipated additional modeling work to create a Bogue Inlet “safe box”, and to also develop a standalone Biological Assessment for the Master Plan that would result in a project specific endangered species take limit rather than depending on the regional Biological Opinion. The total contract amount inclusive of the amendments is \$2,787,124. As of the conclusion of the 2018 calendar year, ~\$2,775,470 has been invoiced to date and therefore leaves a balance of \$11,654. The final PEIS was completed in the fall of 2018 including the concurrent issuance of State and federal permits/authorizations that were seamlessly utilized for the Post-Florence Renourishment Project. Considering \$11,654 is remaining in the contract, \$15,000 is considered as a safe, “round up” budget number for FY 2019-20 to tie up the loose ends (namely a BOEM sand and gravel lease), and therefore conclude the contract.

(6) Office Cleaning (\$3,120). Outer Banks Cleaning is the SPO’s cleaning service and was selected for “economies of scale” purposes. In 2015, the SPO’s physical location was moved from NCDOT Right-of-Way property on Hwy 58 at the base of the Cameron Langston Bridge (Emerald Isle Bridge) to the Town of Emerald Isle’s former Planning Office. The SPO was confined to a single room and now is comprised of four rooms, in addition to a bathroom and kitchenette – it is located within a single building housing the Town’s Police Department, Board of Commissioner’s meeting room, and additional storage space besides the SPO. Outer Banks Cleaning is used by the Police Department and Town General Government Town and therefore was selected as a cleaning service for the SPO (\$60/week x 52 weeks = \$3,120).

- 1) Beach Surveying (\$155,050 annual monitoring; \$119,800 post-storm survey contingency; and Bogue Inlet Scope of Work \$15,000). **(\$289,850)**
 - 2) Legal Fees, Kilpatrick Stockton. **(\$50,000)**
 - 3) Moffatt & Nichol for engineering consulting (max. estimate). **(\$20,000)**
 - 4) Mapping Website. **(\$7,500)**
 - 5) Master Nourishment Plan. **(\$15,000)**
 - 6) Office Cleaning. **(\$3,120)**
- Total = **\$385,470**

OTHER EXPENDITURES (\$43,246)

Although the following expenditures have not been considered as direct expenditures from the Shore Protection Office account, they are presented here to adequately reflect the overall budget of occupancy taxes designated for the purposes of beach nourishment.

County Occupancy Tax Administration Fee (\$43,246)

Per S.L. 2013-223 and previous versions approved by the General Assembly, Carteret County can implement an administration fee for the occupancy tax including up to 3% of the first \$500,000 of gross proceeds and 1% of remaining gross receipts collected each year. Beginning on January 1, 2014 the occupancy tax collection rate was increased to 6% via S.L. 2013-223 with 50% (or 3% of the total 6% collection) attributed to the nourishment reserve – in other words, the nourishment reserve absorbs one half of the administration fee. Our estimate was generated by applying this formula to our forecasted FY 2019-20 revenue - a 1% increase from FY 2018-19 is estimated to be \$7,649,252 occupancy tax (total) and therefore \$3,824,626 for the nourishment reserve).

PROJECTS (\$0)

Projects – None formally budgeted but Phase II of the Post *Florence* Renourishment Project is tentatively scheduled for winter 2019-20 and will encompass central and west Emerald Isle, Pine Knoll Shores and west Atlantic Beach. However the project will be predicated based upon FEMA's reimbursement/lump sum determination. Ultimately the nourishment reserve, if reimbursed for Phase I (winter 2018-19), should be in very good standing to provide monies for any discrepancies in reimbursement vs. actual cost for any of the beach municipalities, and to construct the Atlantic Beach portion of the Phase II effort ("non-engineered" reach). Considering the FEMA reimbursement/lump sum issue could sway the reserve by millions of dollars one way or the other, it will be addressed at a more appropriate time during the course of FY 2019-20.

***Historical Note (FY 2001-06)** In accordance to S.L. 2001-381 (later replaced by S.L. 2007-112), Carteret County distributed designated funds to the municipalities of the County from occupancy tax proceeds collected between January 1, 2002, and June 30, 2006 (**\$4,392,020** total). FY 2006-07 was the first year municipal allocations were not in effect.

***Historical Note (FY 2011-12)** In FY 2011-12 the County received an **\$810,671** reimbursement for a Section 933 Project that was completed several years earlier. This reimbursement was subsequently distributed to the State's Division of Water Resources and the Town of Pine Knoll Shores per an Interlocal Agreement.

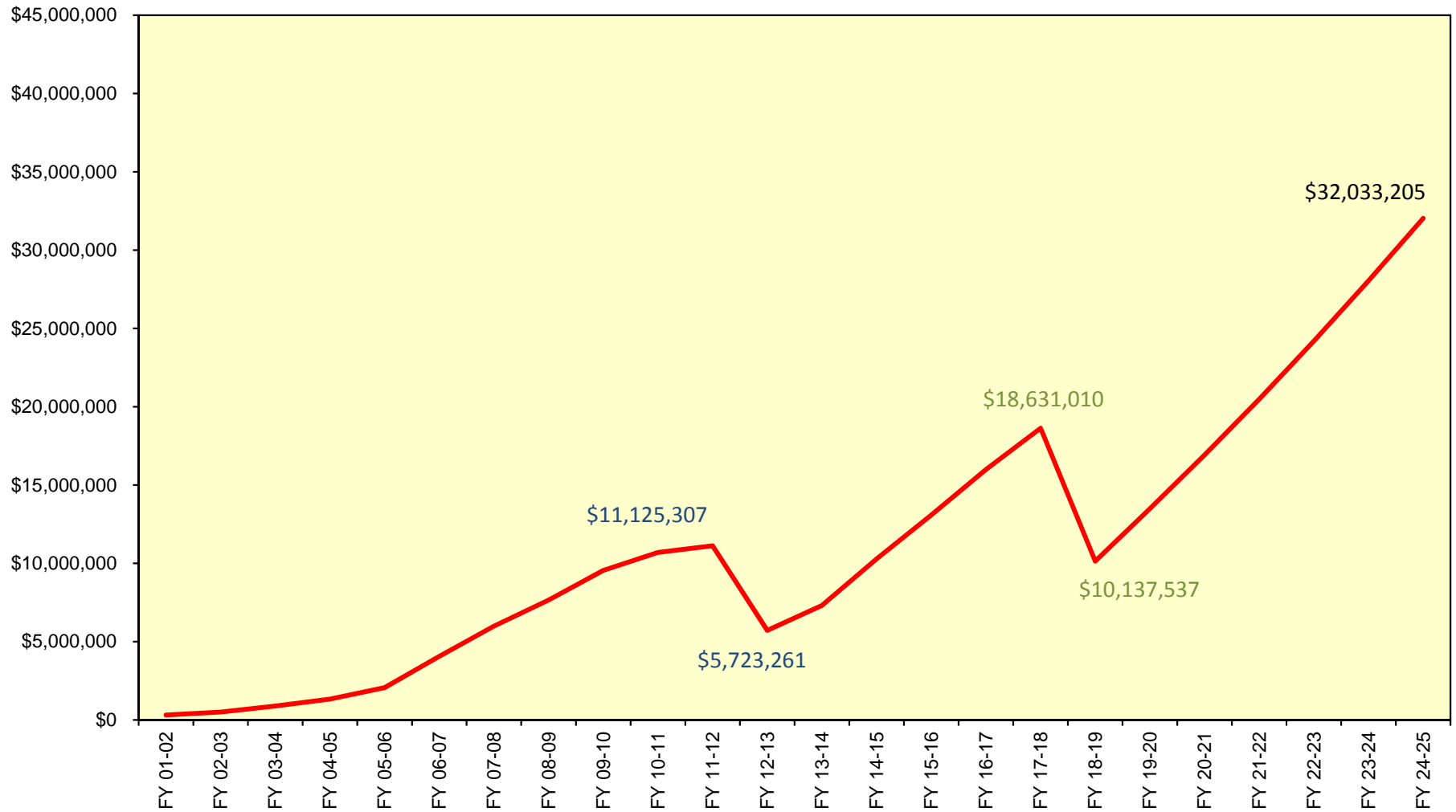
***Historical Note (FY 2012-13)** The Post *Irene* Renourishment Project was designed to deliver 913,165 cubic yards (cy) of sand along 6.6 miles of oceanfront beach within the Towns of Emerald Isle (EI) and Pine Knoll Shores (PKS) that experienced acute beach erosion resulting from Hurricane *Irene*, which made landfall in August 2011. The volume of sand includes a FEMA reimbursable component for 269,628 cy plus a "delta" component that is locally funded (75% County and 25% Towns) that will deliver 643,537 additional cubic yards. Subsequent to securing all the requisite State and federal permits/leases, a negotiated contract was approved in December 2012 for a total cost of \$14,612,321 (\$6,922,054 FEMA + \$7,960,267 delta). The project was constructed in February and March 2013 (FY 2012-13) and the County share of the delta component using the 75% cost share mentioned above was **\$6,203,263**. \$259,194 (non-utilized funds) was reimbursed back to the County in FY 2013-14.

(4) Long range actual and forecasted budget (FY 2001-25).

- (a) *Spreadsheet*** including all revenue, expenditures, and reserves for past, present, and future fiscal years.
- (b)** A ***graph*** depicting the cumulative reserve balance through time (FY 2001-25).

SHORE PROTECTION OFFICE																								
ACTUAL (FY 01 - 18), AMENDED (FY 18-19), PROPOSED (FY 19-20), & FORECASTED (FY 20-25) BUDGETS																								
	FY 01-02 actual	FY 02-03 actual	FY 03-04 actual	FY 04-05 actual	FY 05-06 actual	FY 06-07 actual	FY 07-08 actual	FY 08-09 actual	FY 09-10 actual	FY 10-11 actual	FY 11-12 actual	FY 12-13 actual	FY 13-14 actual	FY 14-15 actual	FY 15-16 actual	FY 16-17 actual	FY 17-18 actual	FY 18-19 amended	FY 19-20 proposed	FY 20-21 forecasted	FY 21-22 forecasted	FY 22-23 forecasted	FY 23-24 forecasted	FY 24-25 forecasted
OPENING FUND BALANCE	\$0	\$319,080	\$503,684	\$890,063	\$1,340,869	\$2,069,044	\$4,062,860	\$5,996,954	\$7,662,898	\$9,550,285	\$10,694,288	\$11,125,307	\$5,723,261	\$7,312,865	\$10,283,851	\$13,083,633	\$15,986,798	\$18,631,010	\$10,137,537	\$13,485,121	\$16,919,063	\$20,486,468	\$24,191,643	\$28,039,030
REVENUES																								
NC Water Resources Fund (Feasibility Study, SDI-5 in 2017, other)	\$314,500	\$159,500	\$0	\$85,000	\$141,725	\$55,500	\$103,250	\$0	\$218,250	\$0	\$25,000	\$0	\$0	\$0	\$0	\$953	\$150,000	\$5,173,487						
USACE federal reimbursements (Section 933, etc)											\$810,671													
Irene reimbursement (EI - \$141,585 & PKS - \$117,608.75)														\$259,194										
Occupancy Tax (forecast assumes annual 3% increase)	\$856,091	\$1,641,828	\$1,777,409	\$1,908,613	\$2,217,115	\$2,548,954	\$2,555,364	\$2,395,439	\$2,290,240	\$2,046,600	\$2,034,086	\$1,618,655	\$2,251,811	\$3,202,341	\$3,479,392	\$3,587,489	\$3,676,464	\$3,786,758	\$3,824,626	\$3,939,364	\$4,057,545	\$4,179,272	\$4,304,650	\$4,433,789
Interest on Reserve + (FY Revenues-Expenditures/4) x 0.01								included in occupancy tax figure above										\$164,665	\$109,471	\$143,078	\$177,665	\$213,594	\$250,908	\$289,652
BBBPA	\$12,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$82,101	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
DCM Grant	\$0	\$20,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Revenues	\$1,182,591	\$1,821,328	\$1,777,409	\$1,993,613	\$2,358,840	\$2,604,454	\$2,658,614	\$2,395,439	\$2,508,490	\$2,046,600	\$2,869,757	\$1,618,655	\$2,333,912	\$3,461,535	\$3,479,392	\$3,588,442	\$3,826,464	\$9,124,910	\$3,934,096	\$4,082,443	\$4,235,210	\$4,392,865	\$4,555,557	\$4,723,441
EXPENDITURES																								
Line Item Description																								
110.40.4901.12100 Salaries	\$24,231	\$42,050	\$45,262	\$54,478	\$59,816	\$66,130	\$73,029	\$80,337	\$84,350	\$81,570	\$81,600	\$86,250	\$90,570	\$102,340	\$112,951	\$116,015	\$103,552	\$103,595	\$103,595					
110.40.4901.18100 FICA	\$1,854	\$3,217	\$3,387	\$3,994	\$4,396	\$4,831	\$5,573	\$6,132	\$6,432	\$6,148	\$6,150	\$6,498	\$6,828	\$7,718	\$8,526	\$8,756	\$7,800	\$7,925	\$7,925					
110.40.4901.18200 Retirement Contribution	\$1,192	\$2,061	\$2,222	\$2,675	\$2,937	\$3,247	\$3,586	\$3,945	\$4,188	\$5,284	\$5,688	\$5,824	\$6,403	\$7,211	\$7,692	\$8,401	\$7,854	\$8,135	\$8,135					
110.40.4901.18300 Medical Insurance	\$1,982	\$3,725	\$4,404	\$5,094	\$5,218	\$6,067	\$6,213	\$6,914	\$6,972	\$6,979	\$6,775	\$6,558	\$6,850	\$7,399	\$7,947	\$8,234	\$7,483	\$9,020	\$9,020					
110.40.4901.18600 Workmans Comp	\$0	\$224	\$526	\$573	\$748	\$1,600	\$1,500	\$1,353	\$841	\$888	\$890	\$890	\$1,214	\$1,889	\$1,500	\$2,000	\$2,000	\$2,000	\$2,000					
110.40.4901.18700 401K	\$1,212	\$2,103	\$2,263	\$2,724	\$2,991	\$3,306	\$3,652	\$4,017	\$4,218	\$4,079	\$4,080	\$4,312	\$4,528	\$5,117	\$5,648	\$5,801	\$5,178	\$5,180	\$5,180					
110.40.4901.20000 Supplies	\$1,075	\$652	\$193	\$645	\$547	\$1,681	\$265	\$646	\$668	\$1,300	\$835	\$898	\$818	\$607	\$1,216	\$408	\$829	\$2,000	\$2,000					
110.40.4901.28000 Small Equipment	\$3,157	\$4,312	\$2,640	\$0	\$0	\$3,333	\$0	\$995	\$2,900	\$0	\$0	\$650	\$0	\$16,629	\$252	\$0	\$0	\$2,000	\$2,000					
110.40.4901.31400 In-County Travel																		\$2,400	\$2,400					
110.40.4901.32100 Telephone	\$1,508	\$2,619	\$1,425	\$2,576	\$2,463	\$2,409	\$2,454	\$3,317	\$8,972	\$2,835	\$2,747	\$1,960	\$5,693	\$3,353	\$3,364	\$2,789	\$3,650	\$3,120	\$3,660					
110.40.4901.32500 Postage	\$179	\$307	\$676	\$355	\$381	\$383	\$414	\$306	\$435	\$296	\$335	\$316	\$370	\$325	\$360	\$370	\$227	\$1,000	\$1,000					
110.40.4901.39500 Out-of-County Travel	\$3,171	\$4,831	\$4,870	\$13,460	\$13,181	\$12,205	\$12,307	\$6,445	\$10,137	\$5,940	\$3,912	\$3,039	\$5,800	\$3,628	\$2,340	\$3,356	\$3,559	\$5,880	\$5,880					
110.40.4901.44000 Contracted Services	\$41,281	\$132,384	\$70,531	\$314,977	\$288,204	\$354,411	\$380,919	\$384,652	\$224,843	\$759,448	\$1,388,543	\$346,523	\$586,025	\$294,505	\$486,016	\$484,604	\$346,786	\$485,470	\$385,470					
110.40.4901.49100 Dues and Subscriptions	\$1,000	\$1,640	\$2,575	\$920	\$2,410	\$3,085	\$3,255	\$3,420	\$3,505	\$3,365	\$3,129	\$3,533	\$3,363	\$3,079	\$3,895	\$4,095	\$4,595	\$5,000	\$5,000					
290.40.4230.69901 County Administration Fee	included in occupancy tax figure above			\$25,335	\$28,925	\$27,949	\$27,650	\$27,014	\$26,141	\$24,466	\$23,384	\$20,187	\$25,846	\$36,748	\$37,903	\$40,448	\$41,765	\$42,868	\$43,246	\$44,394	\$45,575	\$46,793	\$48,046	\$49,338
NA SPO Office forecasted at 3% annual increase																			==>	\$604,107	\$622,230	\$640,897	\$660,124	\$679,928
NA Municipal Allocations (Bogue Banks)		\$1,000,000	\$1,000,000	\$1,000,000	\$1,000,000																			
NA Municipal Allocations (Mainland)	\$80,174	\$106,901	\$53,449																					
NA TDA	\$151,496																							
110.40.4901.44100 Feasibility Agreement or PED	\$550,000	\$329,700	\$196,606	\$115,000	\$218,450	\$120,000	\$203,704	\$200,000	\$236,500	\$0	\$100,000	\$330,000					\$646,974							
110.40.4901.44200 USACE federal reimbursements to local municipalities											\$810,671													
NA Reserve Contribution for Nourishment Projects												\$6,203,263						\$16,932,790						
Total Expenditures	\$863,511	\$1,636,724	\$1,391,030	\$1,542,807	\$1,630,665	\$610,637	\$724,520	\$729,494	\$621,103	\$902,598	\$2,438,738	\$7,020,700	\$744,308	\$490,549	\$679,610	\$685,277	\$1,182,252	\$17,618,383	\$586,512	\$648,501	\$667,806	\$687,690	\$708,171	\$729,266
(Deficit)/Surplus for Year	\$319,080	\$184,604	\$386,379	\$450,806	\$728,175	\$1,993,817	\$1,934,093	\$1,665,944	\$1,887,387	\$1,144,003	\$431,019	(\$5,402,046)	\$1,589,604	\$2,970,986	\$2,799,782	\$2,903,165	\$2,644,212	(\$8,493,473)	\$3,347,585	\$3,433,942	\$3,567,405	\$3,705,175	\$3,847,387	\$3,994,175
ENDING FUND BALANCE	\$319,080	\$503,684	\$890,063	\$1,340,869	\$2,069,044	\$4,062,860	\$5,996,954	\$7,662,898	\$9,550,285	\$10,694,288	\$11,125,307	\$5,723,261	\$7,312,865	\$10,283,851	\$13,083,633	\$15,986,798	\$18,631,010	\$10,137,537	\$13,485,121	\$16,919,063	\$20,486,468	\$24,191,643	\$28,039,030	\$32,033,205

**Actual (FY 01 - 18), Amended (FY 18 - 19), Proposed (FY 19 - 20),
& Forecasted (FY 20 - 25) Budgets**



- (5) Program Summary detailing 2018 Accomplishments and 2019 Objectives for the Shore Protection Office.**

Department Name: SHORE PROTECTION OFFICE		Function of Government
Purpose of the Shore Protection Office (SPO)		
(a)	Provide staff support and administrative guidance to the Carteret County Beach Commission.	
(b)	Serve as main point-of-contact for all beach restoration/shore protection activities in Carteret County, directly interfacing with the local municipalities and County Board of Commissioners.	
(c)	Serve as principle liaison with the U.S. Army Corps of Engineers, federal Bureau of Ocean Energy Management, N.C. Division of Coastal Management, N.C. Division of Water Resources, and other resource/permitting agencies regarding beach restoration/shore protection projects the County and local municipalities are undertaking.	
(d)	Represent the County on State, federal, and Non-Government Organization advisory boards and panels concerning matters pertaining to beach restoration, technology, and policy.	
(e)	Manage waterway dredging projects within the County including all aspects of federal/State permitting and authorization, grant application preparation and administration, contractor solicitation and award, construction oversight, and coordination of these and other activities with County Staff and the Board of Commissioners.	
(f)	Help oversee/coordinate County policy and legislative affairs, lobbying efforts, and communications with federal and State elected and appointed officials regarding all elements of coastal policy, including interactions with the County Board of Commissioners.	
(g)	Oversee monitoring efforts associated with permit compliance; and to ascertain the overall condition of the County's beaches for nourishment and inlet maintenance project planning while fulfilling FEMA's monitoring/maintenance requirements for engineered beaches.	
(h)	Serve as an information clearinghouse for science and policy matters related to beach restoration/shore protection in Carteret County and abroad.	

2019 PROGRAM SUMMARY

(I) PROJECT MANAGEMENT / COORDINATION

(1) Master Nourishment Plan

Summary (2018 & prior) - In 2008-09 the Bogue Banks communities and County Beach Commission agreed to begin pursuing a local, multi-decadal nourishment plan for the entire 25-mile long island intended to supersede the “one by one” project philosophy necessitated by the hurricane impacts of the mid to late 1990s. Besides constraining suitable sediment borrow sources, the Master Nourishment Plan is aimed to identify minimum level of protection thresholds/nourishment triggers in addition to satisfying National and State Environmental Protection Act (NEPA and SEPA) coordination requirements. The NEPA/SEPA coordination effort is envisioned to utilize a “Programmatic EIS” (Environmental Impact Statement) that should streamline environmental permitting throughout the 50-year life of the project. Ideally the Master Nourishment Plan will provide the vehicle to; (1) protect public resources/infrastructure and coastal development, (2) maintain each community’s eligibility for FEMA reimbursement of sand lost during a federally-declared disaster, and (3) consolidate the individual municipalities’ 25-year nourishment plans the State requires for static vegetation line exceptions.

A thorough selection process was successfully completed in 2009, including the development of a Request for Qualifications package and solicitation, review of 8 qualification packages, the interview of three firms, and negotiations with the most qualified/favorable contractor, which was Moffatt & Nichol. The contract was executed in January 2010 at a total cost of \$1,745,000 and has since undergone two contract amendments related to; (1) the facilitation of the physical sand search component for both the Master Plan and an interim Emerald Isle Hot-Spot Project that ultimately became the Post-*Irene* Renourishment Project, and (2) additional modeling work to create a Bogue Inlet “safe box” that was unanticipated, and to develop a standalone biological assessment for the project that would result in a project specific endangered species take limit rather than depending on the regional biological opinion. This standalone biological assessment is part of the NEPA documentation and permitting process. The total contract amount inclusive of the amendments is \$2,787,124. As of the conclusion of the 2017 calendar year, ~\$2,691,434 has been invoiced to date and therefore leaves a balance of \$95,690.

During the waning stages of 2013 the draft Engineering Report and supporting appendices were completed, representing the culmination of all geophysical mapping, cultural resource evaluations, offshore coring activities, GENESIS/SBEACH modeling, and Crystal Ball analysis that were consequently utilized to develop minimum level of protections, borrow source areas, a Bogue Inlet “safe box”, and a financial plan that will serve as the fundamental planning tool for the collective efforts of the County and the Bogue Banks municipalities. The U.S. Corps of Engineers (regulatory) held a Project Review Team Meeting on October 29, 2013 for the Master Plan that included all the federal and State resource agencies, which served as a springboard to begin assembling and coordinating the Programmatic Environmental Impact Statement (PEIS) for the Master Plan.

To this effect, the Engineering Report was submitted to the firm of Dial & Cordy to the U.S. Corps of Engineers (Corps) in September 2014. The Corps utilizes a 3rd party contractor to prepare EISs for regulatory projects such as the Master Plan – that 3rd party contractor is retained however by the applicant

(County in this instance) and prepares the EIS for the Corps to subsequently use, modify, and submit as their own to fulfill NEPA/SEPA requirements. The highlight and a main emphasis of the Master Plan EIS is the identification of the “preferred alternative” and the documentation of potential environmental impacts to all the resources agencies and public at large.

Also, the Shore Protection Office served as a liaison to gain formal approval of the Master Plan by the Towns of Atlantic Beach, Pine Knoll Shores, Indian Beach, and Emerald Isle as stipulated in an Interlocal Agreement (ILA) dated March 15, 2010. In general the ILA details the deliverables that should be included in the Master Plan and the responsibilities of the parties involved (e.g., easements, construction logistics, indemnity, etc.). One of the provisions contained in the ILA was formal endorsement of the Master Plan by each Bogue Banks municipality, and this was completed via individual Town Board resolution approvals in July and August 2014. Moffatt & Nichol accompanied the Shore Protection Office at each Town meeting to provide [a review of the Master Plan](#) to ensure there was a common level of understanding before the resolutions were adopted.

Another component of the Master Plan effort is to secure a sand and gravel leasing agreement from the Bureau of Ocean Energy Management (BOEM). One of the target borrow sources for the Master Plan is the Offshore Dredged Material Disposal Site (ODMDS) associated with the construction and continuing maintenance of the Morehead City Harbor Federal Navigation Project. Because the bulk of the ODMDS is located within federal waters (3 – 200 miles offshore), a lease is required. Similar to other components of the Master Plan; the leasing process is being coordinated synchronously with the EIS and ideally will be secured within the same timeframe as the issuance of the N.C. Division of Water Quality 401 certification, the N.C. Division of Coastal Management Major Permit, the U.S. Fish & Wildlife Service and National Marine Fisheries Service’s Biological Opinion, and the Corps Permit and Record of Decision.

Although there was minimal tangible activity in 2015 and 2016, beginning in the middle stages of 2016 we begun holding monthly phone conferences with the U.S. Army Corps of Engineers, Dial & Cordy, and the Bureau of Ocean Energy Management to ensure the Master Plan EIS was moving forward. Consequently, 2017 was punctuated by the release of the Draft EIS on [April 14, 2017](#) and the submittal of the Biological Assessment which was confirmed by the National Marine Fisheries Service on [September 8, 2017](#).

2018 proved to a productive year with the release of the Final EIS on [March 1, 2018](#). Subsequent to the closing period for public comment (April 2, 2018) and input received from federal and State resource agencies, the development of both the federal “Record of Decision” (ROD) and Permit, and N.C. Division of Coastal Management Major Permit were initiated and completed as [Federal Action ID SAW 2009-00293 CAMA Major Permit #91-18](#), respectively. Also, a standalone [Biological Opinion](#) (SER-2017-18882) was issued on October 23, 2018 in response to a Biological Assessment submitted by the County to address sea turtle considerations for the Master Plan – note: “in the water” = National Marine Fisheries Service and “on the land” = U.S. Fish & Wildlife Service. And lastly a sand and gravel lease was executed between the County and Bureau of Ocean Energy Management (BOEM) on ___ for the excavation and use of material dredged in federal waters.

2019 Objectives – The first nourishment project to be implemented under the Master Plan authorization umbrella will be constructed in the March to April 2019 timeframe. A nourishment project was being initially planned during the summer of 2018 entailing ~5.4 miles of beach and ~910,000 cubic yards (cy) to be placed along East Emerald Isle and Indian Beach/Salter Path in the winter of 2018-19. However, Hurricane

Florence impacted this same stretch of beach resulting in a ~945,000 cy loss of sand. Accordingly the local governments re-focused our efforts, made a few slight changes, and re-termed the project as the Post-*Florence* Renourishment Project (Phase I). Although this project will be constructed using Master Plan regulatory vehicles, the title of the project best describes what we are trying to accomplish, and is more consistent for FEMA reimbursement purposes. Great Lakes Dredge & Dock furnished a bid totaling \$20,109,385 and after adding internal safety-net contingency funding, the project budget total is \$20,910,385. The SPO has developed a website for the project to monitor the construction progress. Five (\$5) million from the State's Division of Water Resources was also secured for the project, which was stipulated in State [Session Law 2018-5](#), Sections 15-6 and 13-10. The \$5 million of State funding provided to the County will be apportioned based on the percentage of cubic yardage to be received per municipality, and the balance of cost per municipality will be split 75% nourishment reserve and 25% of the Town receiving nourishment.

(2) Dredged Material Management Plan (DMMP), Channel Re-Alignment, & Use of the Offshore Dredged Material Disposal Site (ODMDS)

DMMP Summary (2018 & prior) - The DMMP is part of a legal settlement reached with the U.S. Army Corps of Engineers (Corps) in December 2008 concerning dredged material handling conflicts at the Morehead City Harbor Navigation Project. This phase of legal action previously included a national search in 2006 to retain Kilpatrick Stockton, LLC (now Kilpatrick Townsend) at a “not-to-exceed” contract \$900,000. As part of the settlement, the DMMP was stipulated to be completed by October 2011 and would codify how dredged material handling practices at the Harbor will be coordinated to avoid previous dumping practices that misplaced sand offshore rather than along the County's beaches. The new DMMP must also be consistent with the State's coastal zone management plan. However a request by the National Park Service (NPS) to consider offsetting shoreline impacts via nourishment from the Harbor surfaced for the first time ever in December 2010, and the consequent bureaucratic process of incorporating that request into the DMMP shifted the completion date past the October 2011 deadline. There was very little communication with the Corps or NPS in 2013, but in 2012 there were high level conversations with the Corps/NPS to resolve this issue – namely related to a formal request to include a terminal groin option in the DMMP, which was subsequently denied; and continuing conversations related to how sand will be apportioned to the “Shackleford Side” and the “Bogue Banks Side” of Beaufort Inlet when nourishment is involved with the federal navigation project. Moreover in the off years when nourishment is not a component of harbor dredging, the local governments engaged the Corps to ensure the County/municipalities can pay for the delta/additional cost of placing sand on the beach, and to have the regulatory mechanisms in place as well to do so under the nexus of the DMMP.

A draft DMMP was released on October 23, 2013 and the County subsequently requested an extension and a public hearing that were both granted - February 3, 2014 for written comments and January 15, 2014 was the public hearing. The Beach Commission/Shore Protection Office also provided seed money to start the Carteret Coalition to Protect Our Shores and the “[Keep Shack Wild](#)” effort to serve as an education and awareness tool (i.e., what is a DMMP? Where does the sand go now? When does the public comment period end?, etc.); and to also garner support from a broad range of perspectives outside local government on elements of the DMMP that should be changed. From the Shore Protection Office's perspective the DMMP was deficient for the following reasons; (a) It proposed to nourish Shackleford Banks for the first time ever, (b) The proposed Shackleford Banks nourishment zone (middle of the island)

didn't mitigate the area the navigation project has clearly impacted (western tip), **(c)** By nourishing Shackleford Banks and not ensuring what specific quantities are delivered to Shackleford Banks or Bogue Banks, the DMMP clearly provided less nourishment than was historically placed along Bogue Banks as mitigation for the navigation project, **(d)** The DMMP provided no mechanism to ensure most of the sand was to be placed west of Ft. Macon and well into Atlantic Beach – sand placed along Ft. Macon migrates rapidly into Beaufort Inlet, providing almost no benefit for Atlantic Beach and other communities west. And lastly, **(e)** After insisting time and again, the Corps/NPS did not provide any mechanism to allow non-federal sponsors on occasion to pay for the additional cost of placing sand on the beaches of Bogue Banks rather than dumping the sand offshore as outlined in every year “2” and “3” of the DMMP.

The Shore Protection Office helped prepared resolutions concerning the DMMP and had numerous meetings with NPS officials, Town officials, and Corps of Engineers in the process. These efforts successfully culminated in a letter dated [June 11, 2014](#) whereby the NPS requested the Corps to eliminate the Shackleford Banks nourishment alternative in the DMMP altogether. The Corps subsequently reformulated the DMMP, which was released as a [Final Integrated DMMP and Environmental Impact Statement](#) (EIS) on June 7, 2016.

While not perfect, the Final DMMP was a major improvement over the draft - it eliminated the Shackleford Banks disposal option and clearly includes the area encompassing Ft. Macon, Atlantic Beach, and now Pine Knoll Shores as approved beach disposal areas in any year of the DMMP. This in itself should be considered as a major accomplishment. Conversely, the DMMP does not provide any safeguards ensuring minimum quantities of sand that should be placed on Bogue Banks to offset impacts, nor how much sand should be placed west of the nodal point (i.e., west of Ft. Macon) in order to prevent excessive shoaling into the Morehead City Channel and to be of a benefit to the oceanfront of Bogue Banks. Moreover, navigational servitude and budgetary justifications can be used to preclude Year 1 nourishment altogether. This latter point in our view is not consistent with North Carolina's enforceable Coastal Management Program, and to this effect the Shore Protection Office (County) and legal counsel (Kilpatrick Townsend) formally submitted comments to these effects and worked with the N.C. Division of Coastal Management as they developed the State's consistency position. Ultimately the State issued a [conditional consistency determination](#), which echoes some of the similar concerns expressed by the County. In late October 2016, the [Corps responded to the State's conditional concurrence](#), which were subsequently codified into the final [Record of Decision](#) dated June 9, 2017.

Channel Re-Alignment Proposal – Considered somewhat tangential to the DMMP, in February 2016 the Corps disclosed they were preparing an Environment Assessment (EA) to evaluate a potential [western re-alignment of the Morehead City Harbor Channel](#) (Cutoff and part of Range A) to ease dredging demand of excessive shoaling emanating from the east side of the channel – i.e., intense shoaling into the channel from Shackleford Banks. The Shore Protection Office worked closely with Legal Counsel (Kilpatrick Townsend) and Engineers (Moffatt & Nichol) to prepare a [detailed response](#) highlighting the need for a more thorough appraisal of the shoreline impacts the re-alignment could have to Bogue Banks, questioning whether or not the re-alignment would be a long-term solution based on recent shoaling rates, requesting the evaluation of a terminal groin or jetty as part of the overall evaluation process, and also requesting an EIS be prepared rather than an EA based on severity of the proposal.

An EA was ultimately released by the Corps on September 29, 2017 and the SPO again in a [formal response](#) reiterated our concerns that were not adequately addressed in the EA, particularly noting the absence of a shoreline analysis. Congressman Walter Jones, Jr. (NC-3rd) also [requested](#) the Corps to

address the County's shoreline concerns with respect to the channel re-alignment proposal. As part of the [Corps response](#), they articulated they just want to have the ability to follow deep water for two years, and go back to Shackleford Point every third year with concurrent beach nourishment on Ft. Macon and Atlantic Beach. While SPO was not sure that's what the EA actually proposed, the real issue nonetheless is; (A) If the Corps is allowed to follow the deep water for two years, then (B) that will give the agency all the justification they need to return to deep water under the guise of insufficient funding in the year they need to go back to dredge Shackleford Point with concurrent beach nourishment. Every year the Shackleford Point dredging is delayed, the more shoaling will take place in this location of the channel and therefore more sand will need to be dredged the following year – hence more costly. A few years of this and the “we're just following the deep water” proposal becomes a permanent shift to the west towards Ft. Macon. These concerns were also articulated to the N.C. Division of Coastal Management, and subsequently included in their February 8, 2018 [Consistency Concurrence](#). This “Finding of No Significant Impact” or “[FONSI](#)” was consequently issued on March 19, 2018.

2019 Channel Re-Alignment Objectives – The SPO will continue monitoring the dredging operations and adjacent shorelines utilizing our annual profile network associated with the Bogue Banks Beach & Nearshore Mapping Program (BBBNMP); and coordinate any findings with the N.C. Division of Coastal Management.

Use of the ODMDS – In 2017 the Corps also requested permission via the preparation of [a consistency determination](#) to dispose dredged material at Morehead City Harbor in the ODMDS, located approximately 3 miles offshore rather than at the nearshore berm, located roughly 1 mile offshore. The nearshore berm is near capacity and the Corps, County, and N.C. Division of Coastal Management have agreed that disposing material in ODMDS is not within the inlet complex (i.e., outside the littoral system), which is reflected in the final DMMP as well. However, because of capacity and dredge safety issues the Corps have sought positive consistency determinations to use the ODMDS, which the SPO has not objected to as long as they are “one-time”. The 2017 ODMDS request was for the winter 2017-2018 dredging window and represents the second time in three consecutive dredging cycles that the Corps has asked for permission for a “one-time” ODMDS disposal event at the Morehead City Harbor. The SPO is concerned this could represent a trend of a more permanent use of the ODMDS and [articulated these concerns](#) during the consistency determination evaluation period.

2019 Use of the ODMDS Objectives - In meetings the Corps has indeed disclosed they may prepare a new EA evaluating the permanent use of the ODMDS – this would be a fundamental shift from the recently completed DMMP; and therefore the SPO will monitor, provide input, and ultimately prepare formal comments if the EA is developed.

(3) DMMP – Beach Placement

Summary (2018 & prior) - Although not technically part of the settlement associated with the DMMP (see immediately above), one of the offshoots of the legal action included the Interim Operation Plan or [IOP](#), which was developed by the Corps during the intervening timeframe between the legal settlement (2008) and when the DMMP was completed (2017). Beginning in federal Fiscal Year 2011 (October 1, 2010 – September 30, 2011) the Corps began implementing a rotating 3-year cycle under the guise of the IOP, which again was developed in order to adequately maintain the Morehead City Harbor Federal Navigation

Project until the longer term DMMP was implemented.

Year 1 (2010-11, 2013-14, etc.) of the IOP included dredging maintenance of the Harbor near Beaufort Inlet with concurrent nourishment to the beaches of Ft. Macon and east Atlantic Beach (i.e., the sand is dredged from the inlet and placed directly along the beach). In 2010-11 we coordinated the local effort, ensuring beach quality sand was distributed as far west along Bogue Banks as possible by maintaining close liaisons and interface with the Corps, Atlantic Beach, and contractor (Marinex Construction). This was the first time ever sand was directly pumped to the beaches from the Ocean Bar reach of the Harbor, and the SPO also created a [project website](#) including weekly updates, which was very well received by stakeholders and the general public. Roughly 700,000 of the total 1,340,000 cubic yards were placed along Atlantic Beach with the remainder placed on Ft. Macon.

In theory a recurring “Year 1” of the IOP took place in 2013-14 as detailed in the SPOs construction [progress/summary website](#) for this effort. Because of funding issues and the Corps of Engineers decision-making process, 1,107,585 cy sand was placed along 9,500 feet (1.8 miles) of beach extending to ~1,500 feet west of the Henderson Boulevard Access from April 14 – May 22, 2014. The Corps contractor was Weeks Marine, and this project equated to 7,260 feet (1.37 miles) shorter and 239,115 cy less sand than the 2010-11 effort. The SPO worked with the Corps and Weeks Marine on logistical issues, ensuring the project was completed by the Memorial Day weekend while continuing to stress the importance of placing as much sand west of Ft. Macon as possible. Inordinate amounts of sand placed in Ft. Macon migrates back into and shoals the navigation channel and does little for storm protection purposes along the main oceanfront corridor of Bogue Banks. The SPO also provided weekly progress updates and pictures on the 2014 website (see link above).

Year 1 was the only phase of the IOP that placed sand dredged from the Harbor along the beaches of Bogue Banks. Year 2 (2011-12, 2014-15, etc.) included “touch-up” dredging of the Outer Harbor with nearshore disposal (~250,000 cubic yards), and Year 3 (2012-13, 2015-16, etc.) included a more robust maintenance event for the Outer Harbor, with an estimated 750,000 cubic yards of sand to be disposed in the nearshore disposal area. Areas of the Harbor containing non-beach compatible shoal material were ideally dredged in Years 2 and 3, and were to be disposed in either the upland disposal facility of Brandt Island, or dumped in the southwest corner of the Offshore Dredged Material Disposal Site (ODMDS), located roughly 3 miles offshore.

In reality however shoaling from the east is a recurring and resulted in a chronic problem within the Cutoff range of the Harbor as Shackleford Banks has essentially migrated into the Harbor’s navigation footprint, and therefore the original volumes of maintenance sand estimated for Years 2 and 3 (and even year 1) to avoid draft restrictions was being exceeded annually. Also, the Corps originally envisioned using hopper dredging in Years 2 and 3 to facilitate nearshore disposal, but “dredging the bank” in the Cutoff (i.e., the toe of Shackleford) has proved too dangerous and/or inefficient for hopper dredging. In fact a pipeline dredge in tandem with scows have been the delivery method of choice for dredging contractors for the past several years for Years 2 and 3, with the exception of federal FY 2016 (2015-16), whereby a bucket and barge was utilized by the Dutra Group (albeit also with limited success). The Corps traditionally has received ~\$5 million annually for the past decade for the Harbor unless supplemental monies have been appropriated by means of hurricane spending bills or Corps’ internal Workplan reprogramming ([see FY 2001 – 19 chart](#)). This is falling well short to dredge the roughly 1,000,000 cubic yard annual need at the Outer Harbor.

In terms of beach nourishment, there was also internal dialogue between the Corps, the Shore Protection Office, and Atlantic Beach in 2015 regarding the possibility of the local governments (County and Atlantic Beach) furnishing additional dollars to place the Year 3 sand (winter 2015-16) west of the Corps “least cost” beach placement area of Ft. Macon and east Atlantic Beach; i.e., place the sand west of the Circle in Atlantic Beach. However the short timeframe and logistics involved prevented this concept from moving forward. Regardless the dredging bids received for FY 2016 were above the Government (federal) estimate to award, and consequently a separate bid/award process was undertaken ultimately resulting in a bucket and barge operation with offshore disposal as mentioned above and consistent with “Year 3” planning.

Winter 2016-17 (federal FY 2017) was a beach nourishment year (recurring Year 1 of 3) pursuant to the IOP, and the Corps again approached the County and Atlantic Beach with respect to coordinating a “Delta Project” that would place sand westward of the Circle. In 2015 the amount of sand dredged by the Corps was envisioned to be placed someplace different than the least cost area if the non-federal entities provided additional funding. Alternatively for 2016, the additional non-federal monies would be utilized to dredge **additional** sand and placed where the non-federal entities desired. The Corps would dredge their “Base Plan”, which they envisioned would provide 500,000 cubic yards of material (excavated) to be placed along the beaches extending from Henderson Boulevard westward to the Oceanana Pier. The SPO worked closely with Moffatt & Nichol to determine the quantity of sand, price, and precise nourishment location to develop a Delta Project or “Option”, which resulted in a potential nourishment zone extending 8,800 feet from the Circle westward to Dunescape Villas. The estimated cubic yardage for the Option was 340,000 cubic yards (surveyed in place) at a total maximum cost of \$4.8 million to be split 75% Beach Nourishment Reserve – 25% Atlantic Beach (see [slides 5 – 15](#) for graphics).

The SPO and Atlantic Beach worked with the Corps to develop a Memorandum of Agreement (MOA) for the “Base plus Option” project. The winning bid would be predicated on the lowest Base Bid and the Option would be awarded if the cost presented was under \$4.8 million range. Ultimately however, the timing and constraints of MOA were not practical for the non-federal partners and only the Base Plan was awarded (\$9,435,825 - Great Lakes Dredge & Dock). The SPO again created a [construction progress website](#) for this effort that resulted in the placement of 621,000 cy along 9,000 linear feet of Atlantic Beach, extending from ~Seaspray/Place at the Beach westward to the Circle (see [map](#)).

2019 Objectives – In practice 2016-17 (FY 2017) was the last year of the IOP as the [Record of Decision](#) for the DMMP was issued on June 9, 2017, signifying its actual implementation date. Thus winter 2017-18 (federal FY 2018) was the first true year of the DMMP, which again codifies the 3-year dredging cycle used for the IOP. However as part of longer-term planning, the SPO will continue working with the Town of Atlantic Beach, legal counsel, and engineers to review MOA language well ahead of the next potential Delta possibility to ensure a more seamless process with the Corps. The next nourishment year per the DMMP will be 2020 (i.e., “year 1”).

(4) Beneficial Use of Dredged Material (BUDM) Pilot

Summary (2018) - On February 8, 2018, the U.S. Corps of Engineers posted a “Request for Proposals for Beneficial Use of Dredged Material (BUDM) Pursuant to Section 1122 of the (2016) Water Resources Development Act” in the Federal Registrar: <https://www.gpo.gov/fdsys/pkg/FR-2018-02-09/pdf/2018->

[02613.pdf](#). This Pilot Study vehicle enables the Corps to recommend 10 projects for the BUDM program allowing for transport and placement of dredged material at full federal expense. Bogue Banks, particularly Atlantic Beach and Pine Knoll Shores, are well situated for a BUDM project, whereby the federal Navigation Project (Morehead) and federal Coastal Storm Damage Reduction Project (Bogue Banks 50-year plan) can readily be merged. Additionally, the approved Morehead City Harbor Dredged Material Plan (DMMP) also provides all the environmental clearances for a BUDM “delta project” that could take dredged sand from the Morehead City Harbor and place it past the “least cost zone” of Ft. Macon and east Atlantic Beach via a hopper dredge(s) - namely therefore the sand could be placed in west Atlantic Beach and perhaps Pine Knoll Shores. In practical terms however; (a) no money has been appropriated by Congress/Administration for the BUDM program, (b) the implementation guidance is bureaucratic and (c) the Corps has two years to provide a Pilot Study Report to Congress recommending the 10 projects for the program. Although the likelihood of the BUDM program ever receiving 100% federal funding can be considered as low, a hurricane supplemental bill or some other “one off” bill could include funding and the County needs to be fully leveraged to take advantage of this type of opportunity. Working closely with Moffatt & Nichol, a [BUDM Pilot Project Proposal](#) to the effects described above was submitted by March 12, 2018. In total, the Corps received over 90 BUDM proposals ([detailed list](#)), and the SPO also worked with Congressman Jones’ office to generate [a letter of Congressional support](#).

In late December 2018, the SPO learned “off line” that ***our BUDM proposal did not make the final 10 list***, which was codified on December 28, 2018 in the federal register (see [LINK](#) for announcement and the ten projects that made the list). While discouraging and with no real decision metrics to point to, the SPO put our best foot forward and will continue to work on Morehead City Harbor “delta projects” consistent with similar efforts related to the Morehead City Harbor Dredged Material Management Plan (DMMP).

2019 Objectives – None.

(5) Bogue Banks Beach & Nearshore Mapping Program (BBBNMP)

Summary (2018 & prior) - The BBBNMP represents the most comprehensive beach monitoring network in the State, including 162 shore perpendicular profiles along Bogue Banks, Shackleford Banks, and Bear Island. Subsequent to a 3-year contract with Coastal Science & Engineering, LLC (CSE), a new solicitation was issued in 2008 and a 5-year contract (2008 – 12) was successfully awarded to Moffatt & Nichol (subcontractor is Geodynamics, LLC). A 5-year contract extension (2013 – 17) was executed with the same contractors in 2013 and again in 2018 (2018 – 2022); and the execution of the 2018 survey and preparation of the final report is also considered as an accomplishment over the past year. The [2018 report](#) and other archived reports are available at the SPO’s monitoring webpage at <http://www.carteretcountync.gov/329/Monitoring>. The findings of this report continue to help the County document the overall condition of beaches and assist communities with FEMA reimbursement claims pertaining to storm damage. The storm damage component was particularly relevant in 2011 and 2005 with the passage of hurricanes *Irene* and *Ophelia*, respectively. And even more so in 2018 relative to Hurricane *Florence*, which removed -3,201,447 cubic yards (cy) of sand (as measured to a baseline of -12 feet NAVD 88) along the “engineered” beaches of Pine Knoll Shores, Indian Beach/Salter Path, and Emerald Isle. This volume represents ~225% more loss (or erosion) than experienced during *Irene* in 2011

(-1,403,361 cy). The BBBNMP contract includes an “as needed” rapid response post-storm survey scope of work that was executed days after these three events and these reports became the foundation of a successful ~\$7.3 million FEMA reimbursement request to replace the volume of sand lost to *Irene* in [2013](#) and a ~\$13.8 million *Ophelia* reimbursement which was successfully accomplished in [2007](#). We are currently waiting for a FEMA reimbursement determination in the wake of *Florence*.

The “as needed” post-storm survey also came into play in 2016 with the passage of Hurricane *Matthew*, approximately 40 miles south of Bogue Banks on October 8th. *Matthew* was the first Category 5 hurricane in the Atlantic basin since *Felix* (2007) and paralleled the southeastern U.S. seaboard with landfall predicted almost anywhere from Cape Canaveral, Fla. to Cape Lookout, N.C. after crossing land the first time in Haiti and Cuba. The actual U.S. landfall was at Cape Romain National Wildlife Refuge, S.C. as a Category 1 hurricane. The SPO authorized the post-storm survey ahead of *Matthew*’s passage – the survey data was obtained on October 10 – 16, 2016 and was utilized to prepare a [Hurricane Matthew Post-Storm Impact Evaluation Report](#), which includes the SPO’s field assessment as well as an Appendix. Bogue Banks actually gained a little of sand across the 128,393 linear feet of the island and therefore a FEMA reimbursement claim was not warranted, nor was Carteret County declared a Federal Disaster for the relevant Category (G - Parks, recreational, and other facilities). Categories A and B were declared ahead of *Matthew*, or “debris removal” and “emergency protective measures”, respectively.

For the purposes of monitoring the shoreline, the Mean High Water (MHW) has been defined as the contour of +1.1 feet in the North American Vertical Datum of 1988 (NAVD88) and has been utilized as our “datum derived shoreline”. The contour elevation of +1.1 feet was based using a single tidal datum (Morehead City Harbor) by means of the National Tidal Datum Epoch, which is a specific 19-year period over which tide observations are taken to determine Mean Sea Level and other tidal datums (such as MHW). For our purposes, the +1.1 feet elevation is simply extrapolated between survey profiles to create the MHW contour. Considering; (1) our MHW elevation was determined using a single tidal station, and (2) we have well over a decade of annual monitoring across three different islands (Shackleford Banks, Bogue Banks, and Bear Island) that encompasses roughly 40 miles of shorelines and inlet floodways; in 2017 the Shore Protection Office and Geodynamics, LLC elected to re-assess what the MHW should be in general and to determine if there are differences across the three islands we survey on an annual basis. The results of this investigation are provided at <http://www.carteretcountync.gov/DocumentCenter/View/4081> and utilized the National Oceanic and Atmospheric Administration’s (NOAA’s) VDatum, which provides a model interpolating tidal surface elevations between known points. Based on this study the MHW for Bogue Banks and Shackleford Banks was changed to +1.5 feet NAVD88 and Bear Island was changed to +1.7 feet NAVD88.

The current monitoring contract extension (2018 – 2022) also includes a new a more full coverage, concentrated survey of the Bogue Banks “hot spots” located in east Emerald Isle and Pine Knoll Shores. Geodynamics, LLC is incorporating the use of a mobile laser scanner along a topographic stretch from central Emerald Isle to west Atlantic Beach incorporating 56 profiles. The laser scanner can be considered as a swath acquisition system, obtaining millions of elevation data points per survey event between profiles (topography only). The hot spot reach is surveyed (laser scanned) twice per year – once during routine annual surveying activities before the hurricane season and once after hurricane season. The general goals of the hot spot analysis are; (1) to constrain the specific geographic area of the hot spots, (2) augment other data to determine what might causing the hot spots, and (3) most importantly, use this information to design more effective nourishment projects. The cost for the 2018 – 2022 contract extension is increased to that of 2013 – 2017 due in large part to the hot-spot analysis and the commensurate

expense required to produce the rapid-response post storm report, which has morphed from a more purely “results report” to a detailed storm assessment including pictures, other forms of damage documentation, and characterization of the physical parameters of the storm ([contract extension summary](#)). This has become our main documentary support vehicle for FEMA reimbursement claims.

2019 Objectives – Continue to coordinate the BBBNMP that presently or has formerly helped us reach the following objectives; (1) Establish a monitoring network to determine volume deficiencies during formulation of the Bogue Banks Restoration Project (early 2000s) and future nourishment efforts, (2) Help assess the volume of sand lost/gained during Hurricanes *Floyd* (1999), *Isabel* (2003), *Ophelia* (2005), *Irene* (2011), *Matthew* (2016), and *Florence* (2018); and where applicable, obtain FEMA reimbursement to replace the sand lost during many of these disasters, (3) Serve as spatial control during beach construction events, (4) Assess the fate of various beachfills constructed along Bogue Banks since 2001, (5) Provide a method to determine the overall condition (health) and changing geomorphology of Bogue Banks and adjacent islands, and (6) Serve as the primary database foundation in formulating the Bogue Banks Master Plan. The SPO will also continue to ensure the results of these efforts are summarized in a manner that the public and stakeholders will find as user friendly (e.g. - <http://www.carteretcountync.gov/ArchiveCenter/ViewFile/Item/1296>).

(6) Mapping Website

Summary (2018 & prior) - www.protectthebeachmaps.com was launched in Spring 2008, and is an interactive, GIS (Geographic Information System) web-based mapping program where visitors can view, isolate, zoom, and pan aerial photographs, shoreline positions, turtle nest data, and other spatial datasets of their choosing. This enables the public access to various monitoring and permitting efforts the County undertakes without reviewing large .pdf files or hard copies. Over the past few years, the industry standard operating GIS platform commonly used for this application migrated from “ArcIMS” to “ArcServer”. Our ArcIMS website was obsolete and in order to stay relevant and speak the same GIS language everyone else is; we migrated the site to the ArcServer platform in 2012. Our contractor (Geodynamics, LLC) worked very diligently to keep the costs within the financial allocation designated for annual site maintenance we have traditionally incorporated in our budget. Working with ROK Technologies, they collectively migrated and fully updated www.protectthebeachmaps.com in December 2012, and also created user-friendly video tutorials as well. The format of the website remained the same; but much of the data began to be stored via a “cloud” vehicle rather than by using an external standalone server. In 2018, the www.protectthebeachmaps.com website underwent a large-scale redesign; including new “swipe” features, a “point and click” historical beach profile option, and more. Geodynamics, LLC remains our contractor for this site and was 100% responsible for the 2018 redesign (i.e., no subcontractors).

2019 Objectives – Continue to coordinate updates and provide new information for this public web-based GIS program, working closely with our contractor (Geodynamics, LLC). Emphasis for 2019 will focus on providing and uploading new shoreline data, turtle nesting data, and other layers; while also eliminating redundant or irrelevant layers as well to be user-friendly as possible.

(7) Coastal Storm Damage Reduction Project - Feasibility Study and Preconstruction, Engineering, & Design.

Summary (2018 & prior) - This is often referred to as the “Federal 50-year Project” because the nourishment effort includes initial construction and subsequent periodic maintenance for 50 years with 50% to 65% of federal cost share dollars. Ideally this project would encompass all of Bogue Banks and is coordinated, designed, and administered by the U.S. Army Corps of Engineers (Corps) using the term “Coastal Storm Damage Reduction Project”, or CSDR. A Feasibility Agreement was signed in 2001 and the study was stipulated to cost ~\$3.3 million total and be completed in four years. The Study was nine years overdue and roughly \$1.7 million over budget as we entered calendar year 2012. There was very little in terms of federal appropriations that came the project’s way for a few years and the project itself was languishing. However, the President’s budget released in February 2012 included significant federal funding and a request was made to the County for matching funds - \$430,000, which is ideally split 50/50 with the State’s Division of Water Resources. Simultaneously, the Master Plan is being pursued that is a similar effort but is locally designed, implemented, and funded (no federal dollars). The SPO facilitated several meetings with the Corps of Engineers, local municipalities, and Beach Commission to evaluate the monetary request and hence our overall participation in the Feasibility Study. Ultimately the Beach Commission and municipalities decided that despite the shortcomings, securing the regulatory permits associated with the Feasibility Study will be advantageous for any type of County-wide beach nourishment project, and if the Shore Protection Project is ever constructed; it may be eligible for emergency repairs as deemed by the U.S. Congress. The Beach Commission/County also went on record disclosing that this would be the final monetary installment for the Study, which has since been honored by the Corps of Engineers. Unfortunately the State’s General Assembly did not appropriate the compulsory cost share for the Feasibility Study in their 2012-13 short session nor 2013-14 long session after the County provided the full non-federal cost-share.

On August 2, 2013 the Corps issued the draft integrated Environmental Impact Statement (EIS) and Feasibility Report for public comment, which was a major project milestone. The SPO provided the County’s response and also helped coordinate/formulate the responses prepared by the Bogue Banks municipalities, which for the most part were related to the parking/access requirements specified in the Feasibility Report. Comments to these effects triggered a meeting with the Corps and Bogue Banks municipalities on October 9, 2013, and the Corps agreed to investigate the impacts to the final cost-benefit ratio if the parking/access requirements were changed or not adhered to.

2014 was a milestone year for the Shore Protection Project highlighted chronologically by;

- (a) Civil Works Review Board (CWRB) briefing – the CWRB is an assembly of Corps staff from the District level up through the Headquarters and serves as a “corporate” checkpoint signaling the final decision report and NEPA document are ready for State and Agency Review as required by the Flood Control Act of 1944. There were 58 persons (36 live/22 via phone) who attended this meeting that took place in Washington, D.C. on June 27, 2014 (see [placemat](#)). The SPO attended and prepared/provided a sponsor presentation to the CWRB while working closely with the Wilmington District to ensure the review process would conclude positively.
- (b) Chief’s Report - The culmination of the CWRB briefing process, if favorable is the issuance of the

Chief's Report, which signifies the final official review period for the Integrated Feasibility Report and EIS (NEPA document). To this effect, the Bogue Banks Coastal Storm Damage Reduction [Chief's Report](#) was submitted to the U.S. Congress on August 7, 2014 subsequent to addressing concerns/issues raised at the CWRB briefing.

- (c) [Agency Review/Signed Chief's Report](#) – Once resource agency reviews are completed and addressed (both federal and State), the Feasibility Report/EIS is considered finalized and the Chief's Report is modified and signed a last time to reflect any changes that occurred during the review process. The [final, signed Chief's Report](#) was executed on December 23, 2014.

2016 was also a milestone year for the CSDR Project and unexpectedly so. First and more of a matter of formality, the Chief's Report signifies the conclusion of the Feasibility Phase and qualifies the Bogue Banks CSDR to become authorized by the U.S. Congress. The Record of Decision, which is required by NEPA for EISs was signed by the Assistant Secretary of the Army (Civil Works) on [February 11, 2016](#). Congressional authorization, once passed and signed into law by the President, makes the Bogue Banks CSDR Project eligible to receive construction and maintenance funding from the federal treasury if provided in annual Energy & Water Appropriations Bills. This latter part has proven to be elusive as of late – Dare County received authorization in 2000 and the project has yet to be constructed and these communities have financed their own projects since. Topsail Island was authorized in 2014 and again are pursuing their own initiatives. However having an authorized project would make us eligible for federal, emergency funding if a mega-disaster, akin to a SuperStorm *Sandy* ever hit and although unlikely now, perhaps through regular order Congressional appropriations in the future. To these ends, it is important the Bogue Banks CSDR is authorized in a Water Resources Development Act, or WRDA.

Ideally WRDAs are passed every two years but there is no Congressional mandate to do so as evidenced by its passage history – 1974, 1976, 1986, 1988, 1990, 1992, 1996, 1999, 2000, 2007, and 2014, which was actually termed the Water Resources Reform and Development Act (WRRDA) of 2014. With 2016 being a Presidential election year, it was surprising there was interest in pursuing a WRDA. The SPO worked closely with Congressman Jones' office and the House Transportation & Infrastructure Committee to ensure the Bogue Banks CSDR was included in all drafts of the proposed 2016 WRDA bill. Ultimately the House and Senate passed a conference WRDA bill entitled the "Water Infrastructure Improvements for the Nation Act," or "WIIN" which was signed into law by the President on [December 16, 2016](#). The authorization of the Bogue Banks CSDR was keystone accomplishment in 2016 and for the SPO/Beach Commission as a whole since their inception in 2001.

The next phase of the CSDR Project is Preconstruction, Engineering & Design (PED) whereby the Corps develops the plans and specifications for the construction of the project, ensures real estate easements are in-place, etc. The sponsor (Carteret County) and the Corps will need to execute a PED Agreement to move forward with this next phase of the project. 2017 also proved to be a benchmark year as surprisingly the PED phase was fully funded as Congress/President passed the final appropriation bills for FY 2017. In fact the FY 2017 federal appropriation (\$1,300,000) was recognized as a "new start" for the Corps, which is particularly noteworthy considering all the projects throughout the Country are vying for such designation. The SPO worked with the Corps and County staff diligently to execute a PED Agreement on [November 10, 2017](#), which also detailed the 65% federal - 35% non-federal cost share for the PED as \$1,300,000 federal, and \$700,000 non-federal. Subsequently, a request for \$300,000 of the non-federal funding component was prepared on [December 18, 2017](#) followed by a final non-federal monetary request for the balance of the PED on [June 28, 2018](#). The State's N.C. Division of Water

Resources has a 50/50 cost sharing program in place for CSDR projects, which were successfully leveraged for the PED resulting in \$323,486.92 of State funding (County = \$323,486.93). Note: There was \$53,026.15 of non-federal carry over funding from the feasibility phase applied to the PED.

2019 Objectives – The PED report including final borrow source delineations, plans and specifications, and original construction design should be completed in 2019. The SPO will work with the Corps regarding the details and implementation of the PED, hopefully resulting in construction of the CSDR.

(8) Bogue Inlet AIWW Crossing

Summary (2018 & prior) - The area where the Bogue Inlet Channel meets the Atlantic Intracoastal Waterway (AIWW) near the Cedar Point mainland is known as the inlet crossing and represents a navigation thoroughfare maintained by the U.S. Corps of Engineers. There are a total of eight such inlet crossings across the State including from north to south; Bogue, Bear to Brown, New River, Topsail Creek, Shinn Creek, Carolina Beach, Lockwoods Folly, and Shallotte inlet crossings. Because a pipeline dredge is used, the disposal area for each crossing involves an upland or beach target site, and are usually maintained under a single or series of dredging contracts. In 2014, the Bogue Inlet AIWW Crossing was dredged with concurrent beach nourishment/disposal located at the western tip of Emerald Isle (“the Point”). The contract was awarded to Southwind Construction and also included Lockwoods Folly and Shallotte Inlet Crossings. An estimated total of 50,000 cubic yards of shoal material/sand were placed at the Point in late January/early February 2014, representing the 13th time since 1984 the inlet crossing has been maintained with a beach nourishment component. The SPO worked with the Town of Emerald Isle, the Corps of Engineers, and the contractor during the project and developed/updated a project website at <http://www.carteretcountync.gov/655/Bogue-Inlet-AIWW-Crossing>.

2019 Objectives – The Bogue Inlet Crossing is dredged between every 2 and 4 years, yet no event is planned for winter 2018-19 (federal FY 2019). The SPO will support federal funding for the AIWW in the interim to ensure backlog does not occur, as backlog up and down the AIWW corridor in North Carolina pushes the next Bogue Inlet Crossing maintenance event deeper into the future. The FY 2020 budget (winter 2019-2020) could include funding for the N.C. section of the AIWW and therefore possibly the Bogue Inlet Crossing.

(9) Hurricane *Florence*

Summary (2018) – After peaking as a category 4 hurricane on two different occasions in the Atlantic, and early track forecasts including a landfall along Bogue Banks as a category 4 hurricane in itself; *Florence* essentially stalled just offshore predominantly on September 14th and 15th exposing Bogue Banks to the northeast quadrant of the hurricane for an excessively long period of time before slowly migrating almost due west towards Cape Fear. The confluence of approach angle, intensity, and duration resulted in record-breaking water levels in parts of the County and likely along Bogue Banks. *Florence* became the storm of record twice for the highest water level ever recorded at the Beaufort, N.C. tide gauge both surpassing and exactly tying the *Hazellone* mark on consecutive high tides, respectively. Along the oceanfront of Bogue Banks, the U.S. Geological Survey deployed temporary water level gauges and surveyed High Water Marks (HWMs) in both ocean and estuarine environments ([link](#)). For *Florence*, the two HWMs recorded along the Bogue Banks oceanfront were +9.19 and +9.80 feet NAVD 88 at Bogue Inlet Pier and the DoubleTree, respectively. For all intents and purposes, we can consider this as our storm tide or stillwater

elevation for *Florence*, which rivals or surpasses any previous Bogue Banks hurricane, understanding the HWM record of the past (especially decades ago) is extremely sporadic and of questionable accuracy considering the subjectivity involved and surveying methods of the time. Regardless, the fact we had the highest water levels ever at the Beaufort gauge twice on consecutive high tides and we were located on the northeast quadrant of the hurricane for an uncommonly long duration, puts *Florence* in a class by herself – almost certainly worse than *Fran* (1996) and *Floyd* (1999), arguably worse than *Hazel* (1954) and *Ione* (1955), and perhaps comparable to *Donna* (1960), which caused breaching of Bogue Banks.

In terms of the physical impacts to the beach, immediately after the hurricane, it was apparent *Florence* significantly impacted the berm and incipient dune field, and only in very isolated areas compromised the foredune. The incipient dune field, or “baby dunes” are generally a product of pioneer vegetation along the beach berm (the flat part of the beach), which initiates dune growth and/or is stimulated by various sand fencing and dune planting activities coordinated through the local municipalities, home owner groups, and individuals. Importantly, the incipient dunes act as a line of defense to the large foredune that fronts most of Bogue Banks and often exceeds elevations of 20 feet. This was an almost uniform beach response from Bogue Inlet eastward to the Circle in Atlantic Beach, or for roughly 20 of the 25 miles of Bogue Banks. From the Circle to Ft. Macon however, there were no dune escarpments or erosion of incipient dunes, let alone primary dune. This is a direct one-to-one correlation to the area that has received 3.2 million cubic yards (cy) of sand since 2011 via three individual beach nourishment events associated with the dredging of the Morehead City Harbor Federal Navigation Project. While these were just visual observations at first, they were confirmed once the survey data was received. The SPO conducted and prepared a comprehensive [field assessment](#) immediately after *Florence*, including photographic documentation of damages, comparisons to previous storms, etc.

The SPO also pre-authorized a post-storm, rapid response survey event inclusive of all 122 profiles positioned along Bogue Banks which was completed within a week of *Florence*’s passage ([Final Florence Report](#)). Looking at the two common monitoring metrics the County utilizes (volume and shoreline), Bogue Banks lost a total of -3,546,411 cy of sand and the shoreline retreated -21 feet landward on average. The volume loss attributed to *Florence* was over 80% more than the last FEMA reimbursement storm, *Irene* in 2011 (-1,952,298 cy). FEMA can reimburse local communities for the sand lost during a federally declared disaster as long as; (1) there was an engineered beach to start with, and (2) the local communities have a monitoring and maintenance plan in place that has been adhered too. The locally-funded projects across Pine Knoll Shores, Indian Beach/Salter Path/ and Emerald Isle that were constructed in 2002, 2003, and 2005 qualifies these municipalities as an engineered beach (~18 total miles), and in consort with the County’s monitoring program; should qualify the municipalities for eligibility to receive FEMA reimbursement for the sand lost during *Florence* (summary of survey results – [Agenda Topic #4](#)). The SPO spent considerable time in the latter stages of 2018 serving as lead liaison and working closely with the municipalities of Bogue Banks, Moffatt & Nichol (engineers), and FEMA representatives.

2019 Objectives – Utilizing information contained in the *Florence* Survey Report, the first nourishment project associated with *Florence* is planned for 2019 and will be implemented under the Master Plan authorization umbrella (see “(1)” above). The SPO will continue to work with FEMA representatives and the municipalities regarding FEMA Public Assistance reimbursement for beach nourishment or their “428” program, which provides a fixed-cost number in lump-sum.

(II) MAJOR POLICY INITIATIVES

(1) Endangered Species Act Issues - Loggerhead Sea Turtle (*Caretta caretta*) Critical Habitat Designation, Red Knot Rufa (*Calidris canutus rufa*) Listing as a Threatened Species, Atlantic Sturgeon (*Acipenser oxyrinchus oxyrinchus*) Critical Habitat Designation, and Green Turtle (*Chelonia mydas*) Listing as a Threatened Species.

Summary (2018 & prior) - The **Loggerhead Sea Turtle** was initially listed as a threatened (not endangered) species in 1978, and after series of legal actions spurred by the Center of Biological Diversity, Turtle Island Restoration Network, and Oceana; both the U.S. Fish & Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) first conducted a population analysis and subsequently produced their initial critical habitat designation for the loggerhead. The Services (USFWS and NMFS) divided the global loggerhead population into 9 Distinct Population Segments (DPS); and each DPS was subsequently classified as threatened or endangered - the Northwest Atlantic DPS that inhabits the eastern seaboard of the U.S. remained as threatened and hence the loggerhead sea turtle has been classified as threatened since 1978 (~35 years) without any critical habitat designation. However in 2013, the USFWS and NMFS disclosed their proposed Critical Habitat areas for the terrestrial and marine environments, respectively on March 25, 2013 and July 18, 2013. These proposed areas included all of the Bogue Banks beaches in addition to distinct nearshore and offshore areas located immediately adjacent to the County's shoreline. The critical habitat designations listed a series of threats that will require special management considerations and any federal action must take critical habitat into account. However, the special management considerations were never detailed and the term "federal action" is very broad and could include issues related to; water resource project permitting, federal grant funding for public access, FEMA funding, lighting ordinances, federal building codes, National Flood Insurance Program, off road vehicle use, pedestrian access, and fishing requirements pertaining to gear, vessel speeds, and geographic use of waters.

The Shore Protection Office took a lead role in educating the public, businesses community, and fellow local governments concerning the Endangered Species Act listing and critical habitat designation process in general, potential impacts of the designation, and past examples. Worked closely with legal counsel to formulate responses to both designations (terrestrial and marine) and requested public hearings to be held in Morehead City for both designations that were well attended. Helped draft resolutions and talking points for all County municipalities to consider and made numerous presentations to these effects. Importantly in 2014 (May 9th), the Shore Protection Manager, legal counsel, and a member of the Beach Commission visited high-ranking officials at USFWS and NMFS headquarters in Arlington, Va., and Silver Springs, Md., respectively to articulate and discuss the County's concerns regarding the loggerhead sea turtle critical habitat designation and the upcoming Red Knot Rufa shorebird designation as well (see immediately below). The Carteret County delegation was also accompanied by Congressman Walter Jones' (NC-3rd District) legislative director. The final critical habitat designation for both the marine and terrestrial environments was published on July 10th and went into effect on August 9, 2014 with no changes to the draft rules that impacted the County's designated area and very, very few changes to the entire designation as a whole.

On September 29, 2013, the USFWS also proposed to list the **Red Knot Rufa** shorebird as a threatened species. Through the auspices of a court-ordered deadline, public comment was due 60 days later and importantly, the USFWS clearly stated they will issue a coinciding critical habitat designation for

the Red Knot in early 2014. Akin to the loggerhead issue described above, the Shore Protection Office led an education effort and formulated the County's response to the proposed listing and concordantly offered suggestions concerning the upcoming critical habitat designation. The Red Knot's U.S. coastal range overlaps with those of loggerhead sea turtles and piping plovers and the USFWS noted a major factor in the recent decline of the Red Knot was reduced food supplies in Delaware Bay due to commercial harvest of horseshoe crabs. Accordingly, a major part of the County's response focused on the fact that Carteret County (or North Carolina) does not possess *major spring stopover areas* and contended the County should not be included in the upcoming critical habitat designation. If the County's shorelines are designated as critical habitat for the Red Knot, then we requested the exact overlays already in place for the piping plover as meeting the Red Knot's critical habitat needs as the piping plover overlays have yet to cause major permitting or land use issues. The USFWS encountered delays in issuing the final listing for the Red Knot, but did so on [December 11, 2014](#), and disclosed plans to designate critical habitat in 2015. However the critical habitat designation was not issued in 2015, 2016, 2017, or 2018.

The ***Atlantic Sturgeon*** spawn close to the river and spend most of their lives in estuaries and the marine environment (including inlets). The species was listed as endangered in 2012 by the NMFS over the objections of just about every coastal State along the Atlantic Seaboard. The States' objection was rooted in the fact that the species population is clearly not in decline – low compared to its peak over a hundred years ago, but again not in recent decline. The proposed critical habitat designation for the Sturgeon was supposed to be released in 2014 and could have huge and far-reaching impacts to the fishing and dredging industries (among others). Ultimately the proposed Sturgeon critical habitat designation was released on [June 2, 2016](#), and was constrained to the upper reaches of the rivers in North Carolina north and south of Carteret County (no critical habitat proposed in Carteret County). Nonetheless, the SPO attended a public hearing on June 23, 2016 at the Crystal Coast Civic Center and expressed concerns concerning regulatory scrutiny for dredging and perhaps fishing at our inlets nonetheless ([article](#)). The SPO continued to serve in an educational function by preparing civic leaders and the public with information concerning the fish itself and the administration of Endangered Species Act as a whole as the proposed Sturgeon critical habitat became a [final rule](#) on August 17, 2017.

The ***Green Turtle*** was listed as a threatened species in 1978 with the exception of the Florida and Mexican Pacific coast breeding populations, which were listed as endangered at that time. As part of the Services' 5-year review process and because of a petition, the Services recently re-examined the status of the Green Turtle and issued a new rule to this effect on [April 5, 2016](#) dividing the Green Sea Turtle into 11 Distinct Population Segments (DPSs) worldwide and providing a new listing status (threatened or endangered) for each DPS. Per the new rule, three of the eleven DPSs are listed as endangered (Mediterranean, Central West Pacific, and Central South Pacific) with the remaining eight of eleven DPSs listed as threatened (North Atlantic, South Atlantic, Southwest Indian, North Indian, East Indian-West Pacific, Southwest Pacific, Central North Pacific, and East Pacific). Carteret County is located within the North Atlantic DPS and therefore the Green Sea Turtle remains as a threatened species for our management purposes. Equally important the new rule stated, "We (Services) are currently evaluating the areas that contain physical and biological features that are essential to the DPSs and may require special management considerations or protection, but critical habitat is not determinable at this time. Therefore, we will propose critical habitat in a future rulemaking." Subsequent to the issuance of this rule the SPO described the occurrence of nesting Green Turtles on our beaches and providing insight on what shape the Green Sea Turtle critical habitat could take on land and in the marine environment.

2019 Objectives – The critical habitat designation for the Red Knot Rufa was due in 2015 but has yet been

released, and therefore formal disclosure of the designation in 2019 is possible. Critical habitat for the Green Sea turtle is also forthcoming, but no tentative date has been established by the Services for its publication in the Code of Federal Regulations. Nonetheless, the SPO will formulate appropriate responses once required and serve as a lead information source for local governments, civic groups, and others by detailing the extent of the designation, the merit of the designation, and potential impacts to the dredging/nourishment, fishing, economic development, and environmental communities (among others). The SPO will also monitor other species listings and critical habitat designations as they are published in the Federal Register.

To date there are roughly 2,414 endangered or threatened plant and animal species in the U.S. and abroad in terms of total DPSs (1,467 animals and 947 plants administered by the USFWS), in addition to 164 marine mammals, sea turtles and other reptiles, fish, invertebrates, and plants administered by the NMFS. Also, 17 species are actively proposed to be listed (16 USFWS + 1 NMFS), 37 species are currently deemed candidates for future listing (23 USFWS + 14 NMFS), and 145 active petitions by groups or individuals are being considered for additional species listings or critical habitat designations (143 USFWS + 2 NMFS).

(2) Outer Continental Shelf Oil and Gas Leasing Program

Summary (2018 & prior) - The Bureau of Ocean Energy Management (BOEM) is the federal agency responsible for administering the Nation's Oil & Gas Energy Program and is guided by Section 18 of the Outer Continental Shelf (OCS) Lands Act requiring the Secretary of the Interior to prepare and maintain a schedule of proposed OCS oil & gas lease sales determined to "best meet national energy needs for the 5-year period following its approval or re-approval." Pursuant to these stipulations a [***Draft OCS Oil & Gas Leasing Program for 2017-2022***](#) was released in January 2015 and in effect would eventually supersede the current lease plan ([2012-17](#)). The Draft OCS Leasing program included 14 potential lease sales in 8 OCS planning areas - ten sales in the three Gulf of Mexico (GOM) planning areas; one sale each in the Chukchi Sea, Beaufort Sea, and Cook Inlet Planning Areas, offshore Alaska; and one sale in a portion of the combined Mid and South Atlantic Planning Areas. The Mid and South Atlantic Planning Area sale as presented in the draft was represented as a large footprint off the Va., N.C., S.C., and Ga. coast including a 50-mile buffer from the shoreline extending 200+ miles offshore. BOEM however sells leases in 9 square mile blocks and on an individual basis, hence the final "lease sale" will actually be a series of individual lease blocks. The total amount of lease blocks to be sold is unknown until the final plan is released - i.e., 1 block, perhaps 4 blocks, perhaps 20 blocks. BOEM cannot expand footprints they provided in the draft - in other words they have to adhere to the 50-mile buffer unless Congress intervenes.

The **Final** OCS Oil and Gas Leasing Program includes individual lease blocks and scheduled dates for sale. If Mid/South Atlantic lease blocks were to be included in the Final Plan, then this would have been the first time since the late 1970s and 80s a lease sale would take place off the North Carolina coast. Although there is no hard deadline for when the Draft Plan becomes Final, it was assumed the Obama Administration would want to finalize the leasing program before they departed Washington, D.C. in January 2017.

Another important component of the Leasing Program is the seismic surveying, which is required to understand the geology of the subsurface. BOEM ideally uses this information to constrain the total

number and fair market value of the lease blocks they plan to offer, while simultaneously the industry utilizes the data to ascertain the economic viability of purchasing the lease blocks. To facilitate the seismic surveying, BOEM prepared a Programmatic Environmental Impact Statement (EIS) and secured a final Record of Decision in 2014. In practice, the EIS is an “umbrella” environmental document the geophysical companies can use to secure individual permits to conduct the seismic work. Four permit applications were submitted in 2015 and each received State consistency. However in July 2015 the National Marine Fisheries Service surprisingly issued a formal request for additional information from the public (i.e., academia, scientists, etc.) regarding the seismic surveying work to prepare an Incidental Harassment Authorization relative to the permits the several companies have already applied for. Ultimately six different companies applied for a seismic permit.

And lastly, BOEM collects all bonuses, rent, and royalty revenues associated with oil & gas exploration and production in the OCS. Unless directed by law, the federal government retains 100% of the proceeds, which is the second largest revenue source for the federal government besides income taxes. There are two notable exceptions;

(1) Within State waters and three miles seaward of State waters, BOEM must share 27% of the revenue – usually provided to the State. For N.C. this would equate to 6 miles offshore (0 - 3 miles is State waters plus the 3 additional miles). This is termed the “8(g) zone” and is not where the resource is nor in the draft plan for the Atlantic OCS.

(2) Beyond this reach (i.e., beyond 6 miles), there is no revenue sharing program except for GOMESA (the Gulf of Mexico Energy Security Act of 2006) whereby the four Gulf of Mexico producing states (Alabama, Mississippi, Louisiana and Texas) receive a 37.5% share of OCS revenues. The royalty portion is significant because it is based off production and GOMESA provides the revenue sharing directly to States and select local governments.

Accordingly North Carolina nor local governments will not receive any revenue-sharing from leasing or offshore production in federal waters unless Congress specifically authorizes revenue-sharing with the State.

The SPO's role for the County in 2015 and 2016 was to; (1) Demystify BOEM's leasing process, (2) Explain the geology of our OCS and therefore why North Carolina is the biggest potential winner or loser regarding oil & gas exploration/production in the Atlantic OCS, and (3) To describe the revenue sharing process. Specifically, the SPO prepared the County's public comment with respect to the Draft Leasing program and worked towards securing a revenue-sharing program if leasing and production does take place in the Mid/South Atlantic OCS, culminating in a presentation to the N.C. Energy Policy Council which adopted a series of [recommendations](#) consistent with this theme. The SPO spent considerable time on this issue in 2015, providing a total of 13 presentations on the subject, traveling out-of-County to speak to elected officials, civic groups, forums, and appointed bodies in places such as Carolina Beach, New Bern, Manteo, and Raleigh while maintaining a neutral position on the economic and environmental issues associated with oil & gas exploration/development and the Draft Plan as a whole.

As expected, decisions concerning both the final 2017-2022 Oil & Gas Leasing Program and seismic surveying were made by the Obama Administration before their departure in January 2017 (see [summary](#) from May 2016). (1) On March 15, 2016 via a joint press release by the Department of Interior

and their subsidiary agency, BOEM; the Atlantic was removed entirely from the 2017-2022 Leasing program. (2) On January 6, 2017 BOEM formally denied all six applications to conduct seismic surveys.

However rather than waiting for the next 5-year plan to be drafted (2022-2027), BOEM announced the Trump Administration was going to re-script the current 5-Year 2017-2022 Oil & Gas Leasing Program into **a modified 2019-2024 plan**. The new 2019-2024 plan was not immediately released however as preliminary public comment was invited and received from July 3 to August 17, 2017 (49,662 comments were submitted electronically). Coupled with the announcement of a new 2019-2024 plan that in essence will replace the previous Administration's (Obama) 2017-2022 plan, the National Marine Fisheries Service (NMFS) in June of 2017, proposed to issue five permits allowing seismic surveys in the Atlantic from the New Jersey/Delaware border to central Florida. Concurrently, the NMFS requested comments on its proposal to issue Incidental Harassment Authorizations (IHAs) if marine mammal takes occur during the specified seismic activities. The SPO prepared a [newsletter summary](#) of these developments, which anticipated an early 2018 release date of the new 2019-2024 plan, which proved correct as the Draft 2019-2024 Leasing Program was released on January 4, 2018.

The first draft of the 2019-2024 Leasing program included the entire breadth of the North, Middle, and South Atlantic Planning Areas as summarized by a [SPO newsletter](#). The NMFS followed months later in November 2018 [granting IHAs](#) to five companies that submitted applications to conduct geophysical surveys along the Atlantic OCS.

2019 Objectives – It is expected the next draft of the 2019-2024 Oil & Gas Leasing Program will be released in the early stages of 2019 and could include lease blocks in the Atlantic. The SPO will serve as an information clearinghouse to this end as the Leasing Program transitions from a draft to final product. Also the SPO will continue to ensure revenue-sharing to the States and local governments is at the forefront of the dialogue if indeed the Atlantic is included in the final 2019-2024 leasing program.

(3) State Sea-Level Rise Policy

Summary (2018 & prior) - The N.C. Division of Coastal Management (NCDCM) developed sea-level rise policy language in 2010, which if approved by the Coastal Resources Commission in 2011 would have added a new section to the State's Administrative Code governing coastal management within the 20 CAMA (Coastal Area Management Act) counties, and was perceived to be used as a springboard for future regulations. The draft policy adopted the prediction of a 1 meter sea-level rise (to 2100) as the official state benchmark and North Carolina was the first state along the East Coast to propose a future sea-level rise rate. It would have also been the first State to develop a policy based upon this future rate. The proposed policy further stated; (1) The 1 meter rise benchmark would be mandated to be used in all future Land Use Plans, (2) Private development would need to be designed and constructed to avoid sea-level rise impacts (1 meter) for the structure's design life, and (3) Public infrastructure would also need to be designed and constructed to avoid sea-level rise impacts (1 meter) for the structure's design life. The implications of this policy in terms of its geographic scope and potentially detrimental economic impact were enormous for the County, and the SPO spearheaded the County's efforts in galvanizing support from other local governments, which ultimately resulted into a negotiated change to the policy that eliminated the 1 meter rise benchmark altogether.

While the County was not directly involved, [S.L. 2012-202](#) was passed in 2012 and disclosed the

General Assembly does not intend to develop sea-level rise regulations. However, if any State agency does move forward with policies and/or regulations; then it can only be the N.C. Division of Coastal Management. The law further codifies the State's approach to sea-level rise by stipulating the methodologies involved to how sea level is to be measured, recorded, and presented in an updated Science Panel report that was due in 2015. The Science Panel Report is to accompany a subsequent Coastal Resources Commission Report that shall study the economic and environmental costs/benefits to the North Carolina coastal region of developing, or not developing, sea level regulations and policies (due December 31, 2015). The law also outlines the manner in which public comment is to be received and both the Science Panel and Coastal Resources Commission Reports were due together on March 1, 2016 per S.L. 2012-202.

In 2014, the Coastal Resources Commission further directed the Science Panel to use a rolling, 30 year timeframe for any sea-level rise forecasts rather than the 2100 that was previously used. The SPO/Manager was also appointed to the Science Panel in 2014 and was one of the three main authors of the Science Panel Report. The [final draft](#) of the Sea-Level Rise Assessment Report, including recommended changes from an external review, was released on March 31, 2015. The report summarizes the sea-level trend across the State, describes why relative sea-level rates are different based on vertical land movement and other factors, and lastly provides three plausible scenarios of sea-level rise for the next 30 years (2015-2045). The report does not advocate one sea-level rise scenario over another and the range inclusive all three scenarios is 1.9 to 10.6 inches for 2015 – 2045.

The SPO subsequently worked with local governments, civic organizations, and the public to summarize the document in comprehensible, meaningful terms with respect to the scientific components of sea-level movement and the 30-year projection(s) the Science Panel was requested to provide (see [summary](#)). As mentioned above, S.L. 2012-202 also mandated the CRC to study the economic and environmental costs and benefits of developing/not developing sea-level regulations and policies; however at their April 2015 meeting, the CRC disclosed they had no plans to develop sea level-based regulations, and therefore can't study the costs and benefits of something it's not going to do ([article](#)). Rather, decisions regarding sea-level regulations, zoning ordinances, or policies should be more of a local government decision. The public comment period concluded on December 31, 2015 and the final Sea-Level Rise Assessment Report was delivered to the General Assembly by the March 1, 2016. The SPO monitored this last phase of the reporting process, and remained available for any education outreach that was requested by the citizenry.

2019 Objectives – The SPO will remain available as an education resource and will continue to monitor the sea-level rise issue as a whole both from scientific and policy standpoints. Importantly, the Intergovernmental Panel on Climate Change's next and Sixth Assessment Report (AR6) is due for release in 2022, and work products to support AR6 will be released before then. Note: AR5 (2014), AR4 (2007), AR3 (2001), AR2 (1995), and AR1 (1990). Moreover the next update to the State's Sea-Level Rise Assessment Report is due in 2020, and therefore it is expected the Science Panel will begin working on this document in 2019.

(4) Flood Insurance Rate Map Update

Summary (2018 & prior) - FEMA's Flood Insurance Rate Maps (FIRMs) are the agency's official record delineating the base 1% annual chance floodplain (aka – the Special Flood Hazard Area), Base Flood

Elevations (BFEs), and various flood zones applicable to a given community. The “1% annual chance” is sometimes used synonymously with the term “100-year flood”, and again is based on chance occurrence. Hence 1 in 100 years is the 1% annual chance ($= 1/100$), while the 1 in 500 year event ($= 1/500$) is the 0.2% annual chance, and so on. More practically speaking however, FIRMs dictate if a property is within the 100-year floodplain and to which zone within that floodplain a property may be subject to (e.g., AE zone, VE zone, etc.); or whether a property/structure is located between the 100 year and 500 year floodplains (i.e., “shaded X” zone); or above the 500 year floodplain altogether (i.e., “unshaded X” zone). This information ultimately determines flood insurance rates and requirements, and where floodplain development regulations may apply.

The effective maps for Carteret County local governments were adopted in the early 2000s and will be ultimately superseded by the new FIRMs once they become effective in 2019 (or thereabouts). Although FIRMs are often prepared by FEMA, the State of North Carolina has assumed this responsibility in a working partnership with FEMA. Specifically the State’s Department of Public Safety – Emergency Management Section (NCEM) is performing this update using a consistent [methodology](#) across the coastal region. The preliminary FIRMs for the County were released on June 30, 2016 and overall the County is experiencing a decrease in the VE zone along most of the Bogue Banks oceanfront – either a decrease to an AE Zone or even out of the floodplain altogether (X Zone) – 3,700 effective VE structures vs. 1,159 preliminary. This is a result of an improved consideration of the Primary Frontal Dune along the island – i.e., the frontal dune stops/buffers the 1% annual chance storm. Conversely there is an expansion of the AE Zone along the County’s estuarine river and creek areas, mostly represented as a trend shifting properties/structures out of the floodplain (X Zone) to inside the floodplain (AE Zone) – 14,050 effective AE structures vs. 16,287 preliminary. This outcome is mostly attributable to how the State constrained the 1/100 year event and resulting flood elevations. The N.C. Emergency Management’s Floodplain Mapping Program utilized a statistical probability approach by incorporating 24 Hurricanes, 22 Extratropical Storms (e.g., nor’easters), and 675 “Synthetic” Storms. Synthetic storms are storm simulations with different tracks, intensities, forward speeds, etc. The output of these storms were also coupled with a more robust modeling grid, improved topography, and new models themselves that were not available in the 1990s when the last FIRM update was being formulated. The end result however lowered flood elevations in the northern half of the State, yet increased Base Flood Elevations (BFEs) south of Cape Lookout. A 90-day public comment period for the preliminary maps concluded on September 20, 2017 that pre-dated the official, statutory 90-day appeal period that closed on November 13, 2017.

The SPO served as a liaison and subject resource for a series of contracts executed between Moffatt & Nichol and County General Government, Pine Knoll Shores, Morehead City, and Beaufort to identify regions where discrepancies lie and generate public comment and official appeals. The SPO concurrently developed [summaries](#) for the public and worked closely and in a reciprocal fashion with the County’s Planning & Inspections Department providing technical expertise, counseling, etc. The SPO educated individuals on Flood Mapping processes and importantly provided tutorials for <http://fris.nc.gov/fris/> by proactively visiting real estate and insurance companies, or inviting such groups to the SPO. The <http://fris.nc.gov/fris/> website was created in lieu of hard copy maps. On a broader level, the Shore Protection Manager ([presentation](#)) worked in tandem with Spencer Rogers, NC SeaGrant ([presentation](#)) to educate the Coastal Resources Commission and formulate ideas to address actual vs. mapped risk, and how to ensure the State’s Coastal Area Management Act (or other vehicle) can be used to accomplish this purpose.

In addition to working with the local communities with respect to the appeals, the SPO also assisted with the preparation of an analysis comparing the 1/100 year high water level statistically based on tide gauge data versus the BFEs generated at the same locations provided in the Flood Insurance Study for the preliminary maps. This [memorandum](#) was submitted as part of an accompaniment to the municipal appeals. Also late in the appeal window, the NCEM-Floodplain Mapping Program provided a [Surge Sensitivity Analysis](#) prepared by their subcontractor (Dewberry). This report essentially incorporated the latest LiDAR ground elevations and latest ADCIRC+SWAN model, and subsequently ran what was envisioned as a hurricane that would generate the 1/100 event BFE. Although the true impact of a complete re-run would not be known until/if all the storm events are incorporated and the statistics are recomputed. NCEM-Floodplain Mapping Program did not change the storm weighting statistics. However based on this memorandum, NCEM-Floodplain Mapping Program offered to re-run the preliminary surge data, which would ultimately change the BFEs for Carteret County (+ or -). If this re-run was requested by local communities, it could prolong the effective date of the maps by 1-2 years. To this end, Morehead City and Carteret County made a request to this effect within the appeal window. A DRAFT revised preliminary set of maps were provided to the County (unincorporated) in December 2018 that reflected the output of running the same storm weighing statistics but using the latest ADCIRC+SWAN model and latest LiDAR ground elevations. The results appear to remove many structures out of the Special Flood Hazard Area that were in the first preliminary set of maps.

2019 Objectives – Continue appeal related activities and education efforts initiated in 2016 both County and State-wide. Work closely with the municipalities and Moffatt & Nichol once the results of the appeal process are disclosed and the transition begins towards certifying the FIRMs (i.e., become effective). It is quite possible final maps could be released for areas outside of Morehead City and the County unincorporated areas, while the revised preliminary maps could be released using the latest LiDAR and ADCIRC+SWAN model therein these two political jurisdictions.

(5) Coastal Barrier Resources System Pilot Study

Summary (2018 & prior) - The Coastal Barrier Resources System was first authorized by Congress in 1982 in the Coastal Barrier Resources Act (CBRA) and aims to; (1) minimize loss of human life by discouraging development in high risk areas, (2) reduce wasteful expenditure of Federal resources, and (3) protect the natural resources associated with coastal barriers. This is accomplished by prohibiting participation in the National Flood Insurance Program (NFIP), and withholding Federal expenditures within discrete geographic areas identified by the U.S. Fish & Wildlife Service (USFWS), who also administers the CBRA program. The USFWS released a digital mapping pilot project report in 2009 that included a recommendation to create a new CBRA system unit within the waters of western Carteret County, potentially limiting water-based infrastructure projects, sand sources for beach nourishment, and navigation improvements. The SPO educated the public, other local governments, and State agencies; and coordinated responses to this proposal, including serving as a host of an informational forum at the Morehead City Train Depot in May 2009 in conjunction with the N.C. Beach Inlet & Waterway Association. The USFWS final pilot study report was supposed to be completed in 2010 and submitted to Congress for approval, but did not materialize for several years. The SPO initiated a dialogue with the USFWS in 2010 and to a lesser extent in 2011, highlighted by a 2010 meeting with the Chief of the Division of Habitat and Resource Conservation in Washington, DC to articulate the County's concerns.

After several years of dormancy and upon the exit of the Obama Administration, the USFWS

submitted the [Final Report](#) to Congress in late 2016. Carteret County received official notification from the USFWS in a letter dated [February 8, 2017](#), and the Report has most of the new NC-06 System Unit intact. There is an area immediately west of the Emerald Isle bridge that was removed from the new unit; but all of Bogue Inlet, a large swath of AIWW Cedar Point waterfront, and all of the AIWW Swansboro waterfront are still in the new Unit. As summarized in the SPO [“Shorelines” newsletter](#), the modified NC-06 Unit now constitutes 6,636 acres of land and water, representing the largest creation of any System Unit in the entire Country (DE-07 is 2nd with 5,358 acres), and 91% of all the new gains in the State of North Carolina alone, and 21% of all gains in the entire Country – all within one new System Unit. The SPO prepared the [County response](#) and helped coordinate responses from the Town of Emerald Isle, Town of Cedar Point, and the Town of Swansboro, while also working with our Congressional delegation opposing the creation of NC-06.

In 2018, H.R.5787 ([Strengthening Coastal Communities Act of 2018](#)) was introduced and considered in the House Natural Resources Committee and eventually would become [Public Law No: 115-358](#) on 12/21/18. The law approved some of the Pilot Project Final Report’s boundary recommendations. However working closely with Congressman Jones’ office, a provision was included in the bill (and final law) that ensured the proposed changes to NC-06 and NC-06P would not be part of this smaller wave of CBRA system boundary approvals.

2019 Objectives – Although the Final Report has been submitted, Congress must approve part or the entire report before the mapping revisions are adopted and codified. Congress could continue to take an “incremental approach” as foreshadowed by P.L. 115-358 as mentioned immediately above, and therefore the SPO will continue to work with the congressional delegation and local communities in 2019 as we monitor the ultimate outcome of the findings contained in the Final Pilot Study Report as it pertains to the NC-06 and NC-06P (i.e., the general area of Bogue Inlet).

(6) Proposed Boundary Expansion for the Monitor National Marine Sanctuary

Summary (2018 & prior) - The Monitor National Marine Sanctuary (MNMS) was designated as the nation's first national marine sanctuary in 1975 and protects the wreck of the Civil War ironclad *USS MONITOR*, located approximately 16 miles southeast of Cape Hatteras. Presently the Sanctuary consists of a water column one mile in diameter surrounding the shipwreck extending from the seafloor to the sea surface. The National Oceanic and Atmospheric Administration (NOAA) is the trustee for the Sanctuary network which aims to conserve, protect, and enhance biodiversity, ecological integrity, and cultural legacy of each sanctuary while fostering public awareness of marine resources and maritime heritage through scientific research, monitoring, exploration, education and outreach.

The National Marine Sanctuaries Act requires NOAA to periodically review the management plan for each of the Nations’ 13 Marine Sanctuaries. For the MNMS, this statutory review was codified in a 2013 Management Plan/Environmental Assessment (see [link](#)). This document in turn served as a springboard for MNMS expansion proposals. On January 8, 2016, NOAA released a [“Notice of Intent To Review Monitor National Marine Sanctuary Boundary”](#), which included four distinct models of expansion. These models are described in detail at <http://monitor.noaa.gov/management/expansion.html>, and all aim to capture more offshore wrecks than the stand alone *USS MONITOR*. The Shore Protection Office interpreted this as a thematic shift as well – one from the “Monitor” National Marine Sanctuary to more of a “Graveyard of the Atlantic” National Marine Sanctuary. NOAA proposed four different models for

consideration, including Model “D” creating three separate designated areas located near **Cape Lookout**, Cape Hatteras, and Nags Head. The purpose of this approach was to “...highlight several “stories” of maritime heritage along the entire Outer Banks, allowing the benefits of sanctuary designation to be enjoyed in multiple communities along the coast. Many historically important wrecks and culturally significant archaeological artifacts from many timeframes and representing several ocean uses are included. It also provides the ability to protect and manage any future potential discoveries within the larger designated areas, and to promote exploration within the boundaries to discover new maritime heritage resources.”

Each sanctuary in the network has its own unique set of regulations, however there are some regulatory prohibitions that are considered “typical” and also characterize those in place today for the MNMS including; (1) Discharging material or other matter into the sanctuary, (2) Disturbance of, construction on or alteration of the seabed, (3) Disturbance of cultural resources, and (4) Exploring for, developing or producing oil, gas or minerals (with a grandfather clause for preexisting operations). However some sanctuaries prohibit other activities such as; (1) the disturbance of marine mammals, seabirds and sea turtles, (2) operation of aircraft in certain zones, (3) use of personal watercraft, (4) mineral mining, and (5) anchoring of vessels.

These prohibitions could negatively impact the commercial and recreational fishing industries, recreational boating, the SCUBA industry, dredging, sand and gravel extraction, and future mariculture opportunities. Because of these potential impacts, the County Board and Chamber of Commerce prepared resolutions against the proposal. The SPO was heavily involved with this endeavor, preparing summary materials ([slides 2 - 8](#)), assisting with the resolutions, and interfacing with Congressman Jones; whom went on record opposing the expansion ([media release](#) – includes Carteret County resolution).

In the latter stages of 2016 and leading into 2017 there was speculation that upon their exit, the Obama Administration would designate the Baltimore, Hudson, and Norfolk Canyons as Marine Sanctuaries. This may have also been an augury for other last minute changes to the Marine Sanctuary network, including the expansion of the MNMS. The SPO again worked with Congressman Walter Jones, Jr. ([see letter](#)) and the local constituency to ensure no changes to the Sanctuary network were implemented.

2019 Objectives – Although no final decisions/rules have been disclosed regarding the MNMS either informally, via the Federal Register, or by Executive Order to date; the SPO will continue to monitor the MNMS expansion and serve as an information clearinghouse to this effect.

(III) APPROPRIATIONS/FUNDING

(1) Federal

Summary (2018 & prior) - FY 2019 (federal) encompasses the October 1, 2018 to September 30, 2019 timeframe, and accordingly, time and effort for most of the 2018 calendar year was placed on securing appropriations for FY 2019, while also seeking any supplemental appropriation opportunities in FY 2018 (October 1, 2017 to September 30, 2018). For well over a decade, the U.S. Congress has encountered difficulty in passing appropriation bills in a timely manner, which has led to continuing resolutions and omnibus packages passed well after the fiscal year starts.

The appropriation process has been confounded to a degree with the “no earmark policy” initiated in 2011, which by *de facto* has placed more emphasis on the President’s/Administration’s budget. In the past, Congress would use the earmark process in their various committees to add/subtract U.S. Corps of Engineers funding to/from the Administration’s budget. With this process now eliminated, the President’s budget has more resiliency and the chances of securing a “Congressional Add” have become slimmer and slimmer. Also, past Administrations have created a very difficult appropriation environment for Carteret County waterway and beach projects constructed and maintained by the Corps of Engineers by providing less and less funding to the Corps of Engineers.

The confluence of; (1) diminishing Administration budgets, (2) the Congressional no earmark policy, and (3) no regular order (i.e., continuing resolutions) was evidenced this year again (2018) but concluded on a series of favorable notes for the Morehead City Harbor Federal Navigation Project. As usual, the only Carteret County-specific project funded in the President’s budget for FY 2018 (October 1, 2017 – September 30, 2018) was Morehead City Harbor (\$5,570,000). The Corps also initiated a more multi-project, regional dredging bid process as part of the FY 2018 effort. Their logic was multi-faceted and includes leveraging mobilization costs, and gaining a sense of surety over the schedule and use of their funds. This approach also has some benefits for smaller harbors like Morehead City because contractually speaking Morehead City Harbor will be coalesced with bigger, National Priority Harbors. Hence, there is a better chance bids are received with a price that is within the government estimate for all the projects, rather than risking a standalone bid for a “lower priority” harbor (i.e., Morehead City). To these effects, the Corps was allowed to utilize the President’s budget figure once the fiscal year started despite no regular order and a contract was awarded to Manson Construction totaling [\\$26.6 million](#) for Morehead City, Wilmington, Brunswick, and Savannah Harbors. The Morehead City Harbor scope of work included hopper dredging of the Cutoff & Range A with offshore disposal at the ODMDS. However in the spring of 2018, Manson Construction was pulled off their regional hopper dredge contract to address emergency shoaling along the Mississippi River prior to mobilizing to the Morehead City Harbor Project.

However and almost concurrently, the final FY 2018 omnibus package was signed into Law on March 23, 2018 as [P.L. 115-141](#) and the federal budget guidance provided several unallocated pots of money for different project categories, including “Deep Draft Harbors and Channels,” “Navigation Maintenance,” and “Small, Remote, or Subsistence Navigation.” To this end, the SPO worked closely with Congressman Jones’ office to request these funds be appropriated to Carteret County specific projects ([Link](#)). Ultimately the smaller waterway projects did not receive any funding but P.L. 115-141 did provide the Corps \$6.83 billion as a whole, which was well above the President’s budget recommendation of ~\$5 billion and even \$800 million more than the enacted FY 2017 level. The Corps in response had to develop a [Workplan](#) to spend these monies across all their projects, which was released on June 11th. Morehead City Harbor received an additional \$12.6 million, which totals over \$18 million for FY 2018 alone when the President’s budget recommendation (\$5,570,000 million) is included. The Corps also received roughly \$5 million additional dollars for Morehead City in a [supplemental bill](#) aimed to address the hurricane impacts from the 2017 season (i.e., *Irma*, *Maria*, and *Jose*). This infusion of appropriations was coupled with ~\$3 million remaining from the failed regional hopper project (Spring 2018) and the N.C Port Authority previously provided \$10 million to Morehead City (later reduced to \$5 million).

The Corps issued a dredging solicitation in the summer that specifically required the use of a cutterhead pipeline dredge to address the shoaling conditions in the Cutoff mainly with direct disposal to either the nearshore berm west or/and the new nearshore berm east located in front of Shackleford Banks.

The [three bids received](#) were over the awardable government estimate and the project was resolicited resulting in [two bids received](#) - both awardable with Great Lakes Dredge & Dock as the bidder (\$18,334,500).

For FY 2019 (October 1, 2018 – September 30, 2019), the President's budget for the Corps of Engineers via their "[Press Book](#)" released in February 2018, included \$5,570,000 for Morehead City Harbor (again, the only Carteret County project in the budget and same value as the year prior). FY 2019 is the third of a recurring 3-year cycle in accordance with the Morehead City Harbor Dredged Material Management Plan (DMMP) and includes Outer Harbor dredging (Cutoff & Range A) with offshore disposal at the ODMDS utilizing a hopper dredge. Similar to FY 2018, the Corps exercised a regional hopper approach for Brunswick, Savannah, Wilmington, and Morehead City harbors resulting in [two bids](#) received – low bid was Great Lakes Dredge & Dock (\$3,320,100 for Morehead City; \$19,472,900 for all four harbors).

2019 Objectives – Continue to lobby for federal funding of the Morehead City Harbor Navigation Project and monitor any supplemental appropriation bills that may develop where small, federally-authorized channels in the County could also receive funding.

(2) Shallowdraft Waterway Summary - State Memorandum of Agreement (MOA) with U.S. Army Corps of Engineers and the Shallow Draft Navigation Channel Dredging & Aquatic Weed Fund.

Summary (2018 & prior) – This instrument (the MOA) allows the Corps to accept State/local money to utilize the government sidecast dredge (the *Merritt*) or small hopper dredges (*Currituck* and *Murden*) to maintain shallow draft inlets located south of Cape Lookout - Bogue, New River, New Topsail, Carolina Beach, Lockwoods Folly, and Shallotte; in addition to Oregon Inlet located well north of this cluster of inlets. The timing and implementation of the MOA was coupled with two components contained in the State appropriation bill of 2013 ([S.L. 2013-360](#)) that endowed a new "**Shallow Draft Navigation Channel and Lake Dredging Fund**" (Shallowdraft Fund). The monies are generated via; (a) an increase in boat registration fees and (b) boat fuel taxes (utilizes one-sixth of one percent of the money allocated from the excise tax on motor fuel to the N.C. Wildlife Resources Commission's Boating Account). The N.C. Division of Water Resources (NCDWR) manages the account and these two revenue streams (gas tax and registration fee) generated ~\$7 million annually. The MOA allows for a maximum annual expenditure of \$4 million for the shallowdraft inlets – however, all of the State money will be cost-shared on a 50-50 ratio with local governments according to the 2013 law. Hence that \$4 million annual cap each year is a \$2 million State - \$2 million local expenditures if each community requires dredging at the shallowdraft inlets and each community participates. In essence, this would almost fund an entire year's worth of work for the sidecast dredge (i.e., the *Merritt* could work just about every day somewhere in N.C.). The original MOA was extended in July 2016 for 10 years (2026 sunset) and raised the cap to \$12 million annually in order to accommodate the dredging needs at Oregon Inlet.

In 2015, a series of important changes were instituted for the Shallow Draft Navigation Channel and Lake Dredging Fund via [S.L. 2015-241](#), Section 14.6(a)(b), and Section 29.4(a). First, the cost share (formerly was 50/50 State/local government) will now be based on economic tiers. Tier I = 3 State dollar for 1 local dollar (i.e., 75 State/25 local). Tier II and III = 2 State dollar for 1 local dollar (i.e., 66 State/33 local). Carteret County is a Tier II, therefore our cost share will be improved from 50/50 to 66/33. Second, the one-sixth of one percent of the money allocated from the excise tax on motor fuel to the N.C. Wildlife

Resources Commission's Boating Account that goes into the fund will be increased to a whole percent. Before the entire fund generated ~\$7 million per year via BOTH the boat registration fees AND gas tax. The 2015 legislation placed this number closer to \$19.1 million/year (\$4.58 million registration + \$14.52 million gas = 2016 estimate). In 2016, the N.C. General Assembly also changed the name of the Shallow Draft Navigation Channel Dredging and *Lake Maintenance* Fund to the "**Shallow Draft Navigation Channel Dredging and Aquatic Weed Fund**" via [S.L. 2016-94](#).

As mentioned above, there is \$19.1 (2016 estimate) to now likely ~\$20 million anticipated in annual revenue for NCDWR, and the balance of the \$12 million that is not used annually of the MOA is accrued in a reserve fund. The \$12 million is split between the local governments and the State using the Economic Tier system so estimating the State expenditures and their input to the reserve value year is difficult to constrain. Nonetheless, the reserve that is allowed to accrue year after year go into the Water Resources Grant Program and is the State cost-share source for other shallow draft waterways in Carteret County – Wainwright Slough, Morgan Creek, Atlantic Beach Channels, Atlantic Harbor channel, etc., which has been utilized already by some of the local governments. Again, these matching funds would require a 33% match and would be issued under the State's competitive grant program administered by the N.C. Division of Water Resources. The estimated Shallowdraft Fund balance at the conclusion of 2018 is ~\$12.8 million ([NCDWR Presentation](#)).

MOA Projects

Bogue Inlet (\$202,500 total in 2018) – In the latter stage of 2017, the SPO worked closely with the Town of Emerald Isle to generate a total of \$262,500 (State \$175,000 + Local \$87,500). The local funds were secured using a Carteret County (40%), Onslow County (40%), Emerald Isle (11%), Cedar Point (3%), Swansboro (3%), and Cape Carteret (3%) cost share formula to match the Shallowdraft Fund. The Corps' small hopper dredge, the *Currituck* excavated 12,495 cubic yards from August 28 through September 5, 2018 at a total cost of \$202,500, leaving an estimated \$95,000 as a balance (note: balances from previous funding initiatives are carried over). This was the first time a Corps' hopper dredge was utilized for Bogue Inlet maintenance since the early 1980s and the SPO worked closely with Emerald Isle, the Corps, and U.S. Coast Guard regarding Aids to Navigation issues to ensure safe passage for mariners before and after the 2018 dredging event. In all likelihood another round of State/Local funding will need to be secured in 2019 to augment the ~\$95,000 balance in order to conduct the next dredging event, representing the sixth such effort ([historical summary](#)).

Bulkhead Channel (\$186,300 total in 2018) – [Ranges 1-2A](#) dredged on August 20 – 27, 2018 in coordination with Bogue Inlet (dredge *Currituck*, 13,585 cy). Remaining State/local balance is \$6,000 and the local portion is generated from the Town of Beaufort and Beaufort Waterfront Enterprises (Haywood Weeks).

Morgan Creek – This U.S. Corps of Engineers authorized channel is situated along the eastern flank of the Radio Island headland and was last dredged in 1999. Mr. Gilliken (Gillikin Marine Railways) first approached the Shore Protection Office in 2012 with shoaling concerns in Morgan Creek and contacted the Governor's Office at that same time. Since then the State's Shallowdraft Fund has been created and subsequently modified to provide a 2:1 – State:Local cost share as described herein. In the interim, shoaling conditions have grown more severe and Mr. Gilliken has been losing business because commercial fishing boats from both North Carolina and out of State cannot access his processing facility. Morgan Creek was last dredged in April of 1999. Also over the course of the past year the SPO has been

working with Corps as they formulated a new Environmental Assessment (“EA”) and Finding of No Significant Impact (“FONSI”) for Morgan Creek in addition to other areas of Bulkhead Channel that have not been dredged in a very long time. The EA/FONSI was required to enable the Corps of Engineers to utilize their small hopper dredges for these project reaches – previously Morgan Creek was only authorized to be dredged utilizing a pipeline dredge with direct disposal on to Radio Island, and in fact the environmental documentation for that authorization was missing in the Corps’ archives. The SPO also provided boring/sediment data to the Corps for Morgan Creek to help the Corps formulate the [EA/FONSI](#), which was completed in December 2018. A Morgan Creek maintenance event is tentatively scheduled for the beginning stages of 2019 and will be completed in coordination with a dredging project also scheduled at nearby Bulkhead Channel.

Water Resources Development Project Grants Secured or Continuing in 2018

Atlantic Harbor Emergency Dredging Project (\$59,717) – In the interim of planning and permitting a long-term dredge and disposal plan for the Atlantic Harbor of Refuge, an intense area of shoaling developed choking the Entrance Channel leading into the Harbor of Refuge and therefore was negatively impacting commercial fisherman as the window opened for the spring/summer 2018 shrimp season. Subsequent to consulting with the N.C. Division of Coastal Management, the County/SPO successfully secured a CAMA General Permit allowing a maximum dredge volume of 1,000 cubic yards (cy) and a base dredge cut no less than -6 ft Mean Lower Low Water (MLLW). While not optimal, this project provided short term relief while the more comprehensive dredge and disposal plan is developed. A budget of \$105,000 was envisioned for the project and a Water Resources Development Project/Shallow Draft Fund Grant was secured (DEQ DWR Contract #7621) inclusive of a 2 state for every 1 local government match. The actual cost of the project was \$89,575, resulting in a \$59,717 State reimbursement (\$29,858 actual County cost). Brooks Dredging & Marine Construction, Inc. was the dredging contractor and started/completed the work the last week of June 2018 ([photos](#)).

Atlantic Harbor (\$235,354) – NCDEQ Grant #7448 (\$156,902.67 NCDWR + \$78,451.33 County). Locate and seek State and federal permit authorization for the disposal of muddy dredged shoal material located in and near the Harbor of Refuge – termed “the big dig”. The emergency project (see immediately above) proved to be very useful to demonstrate that White Point can be used for a disposal site with little impact. Anticipate to submit a CAMA Major Permit application and compulsory environmental documentation in the early stages of 2019, which should provide for construction in winter 2019-20. The County is also working with NC Coastal Federation on a living shorelines component that would also help stabilize White Point.

East Taylor’s Creek (\$324,192) – NCDEQ Grant #7449 (\$216,128 NCDWR + \$108,064 County). The aim of this effort is secure regulatory authorizations to re-align the channel in its former location; and widen and deepen the channel parameters to match the remaining portion of the Taylor’s Creek federal navigation project as one would head towards Downtown Beaufort (central and west portion of Taylor’s Creek). Disposal areas evaluated include; the south beach of Bird Island (Rachel Carson National Estuarine Research Reserve), a Corps of Engineers upland disposal facility, and an adjacent shoal area that would be augmented to create bird habitat. It is anticipated that all regulatory materials will be submitted in the Spring of 2019.

Homer’s Point Channel, Salter Path (\$120,000) – NCDEQ Grant #7689 (\$80,000 NCDWR + \$20,000 County). Homer’s Point Channel was initially authorized and constructed in 1978 by Carteret County pursuant to N.C. Dredge and Fill Permit #60-76 to service commercial and recreational interests, and

thereby providing ingress and egress to and from the Atlantic Intracoastal Waterway and surrounding waters. Since that time, Homer's Point Channel has been considered as a "gateway" navigational thoroughfare for the entire Salter Path and Indian Beach region; and remarkably, no dredging maintenance activities have been conducted at Homer's Point Channel since its original construction (40 years). However, commercial and recreational boaters became concerned with shoaling conditions in a small area that was essentially blocking access to and from the marinas and boat slips at Homer's Point. Similar to the Atlantic Harbor Emergency Dredging project (see above), the County/SPO successfully secured a CAMA General Permit (#716870) and a Water Resources Development Project/Shallow Draft Fund Grant. The dredging contractor (Brooks Dredging & Marine Construction) was supposed to start mobilizing to the project on the Tuesday of hurricane Florence (September 11th). To avoid possible damage to equipment, adjacent properties, human health, and for the sake of overall operational efficiency; the project was temporarily postponed – a grant extension was approved and the CAMA General Permit was re-issued (#73366). The dredging event is scheduled to take place in February 2019.

Old Ferry Dredging Project, Cape Carteret (\$180,000) – NCDEQ Grant submitted and pending (\$120,000 NCDWR + \$60,000 County). This area, as the name implies, is the site of the ferry channel that was in operation from 1961 to 1971 when construction of the B. Cameron Langston Bridge (a.k.a. – the Emerald Isle Bridge) was completed. The channel was originally constructed/dredged under the auspices of Mr. W.B. McLean before the State begun the free ferry service, which utilized three vessels – the *Governor Cherry*, the *Sandy Graham*, and the *Emmett Winslow*. Since the bridge was constructed, the Old Ferry Channel has been the main navigation thoroughfare for the boating community in the Cape Carteret area, providing access to the Atlantic Intracoastal Waterway (AIWW) and Bogue Sound. Maintenance dredging records for the Old Ferry Channel are non-existent however, and it is believed the channel has not been dredged in decades allowing several areas along the channel to shoal in. Deer Creek is one of many tributary channels linking into the Old Ferry Channel and is also part of the overall effort to design and permit the project only, which would require a SAV survey, vibracoring and sediment analyses, etc., hydrographic surveying, etc.

Wainwright Slough (\$235,454) – NCDEQ Grant #7447 (\$156,969.33 NCDWR + \$78,448.67 County). Represents a permitting/regulatory effort to change the federal authorization from a fixed channel to "a follow the deep water" alignment in an effort to reduce the frequency of maintenance events and to address proximity issues associated with the fixed channel alignment and shoaling from the immediately adjacent disposal island (Wainwright Island). The County conducted a complete dredging/maintenance event (34,540 cy) in March – April 2017, and the final total project cost including permitting, construction administration, etc. was \$615,071, with the State reimbursing \$410,047.33 and therefore the actual County cost was \$205,023.67 (see [Final Post Construction Report](#)). The original project grant for new re-alignment effort was based on a total anticipated cost of \$190,454 and the budget of the project was increased to accommodate an additional hydrographic survey. The SPO secured a grant modification to this effect in October 2018 = \$45,000 total (\$30,000 NCDWR + \$15,000 County).

Other (non-MOA or Grant related)

County Dredge Report – Prompted by a surge of County-funded dredging work over the past few years, the SPO initiated a [white-paper report](#) in 2017 that was prepared by Moffatt & Nichol investigating the costs of owning and operating a dredge (maximum estimate = capital - \$11.6 million; annual operation - \$3.7 million).

2019 Objectives – Participate in quarterly MOA meetings hosted by NCDWR that provides status summaries of the Shallowdraft Fund, and updates from the Corps of Engineers. Coordinate and manage the planning and permitting of waterway dredging projects and grant requests to NCDWR by working intimately with consultants, regulators, and grant administrators. Provide technical support to Carteret County General Government if a waterway sales tax referendum is pursued while serving as a resource for the County's Waterways Management Committee (established in 2016).

(3) State Shallow Draft Inlet (SDI) Report and Permits

Summary (2018 & prior) – A SDI Reconnaissance Study was released in the fall of 2013, which was prepared on behalf of the N.C. Division of Water Resources (NCDWR) to identify the time and cost of obtaining general and individual dredge permits for five shallow draft inlets along the southern half of the North Carolina coast (Bogue, New Topsail, Carolina Beach, Lockwood Folly Inlet, and Shallotte River). The SDI report was predicated by two major concerns; **(1)** The aforementioned inlets have been predominantly maintained by two federal sidecast dredges (the *Fry* and the *Merritt*). However the *Fry* was decommissioned in 2010, which reduced sidecast dredging capacity by 50% and the *Merritt* is over 50-years old and therefore is reaching the end of its service life. The Corps also has two small hopper dredges in its fleet (the *Currituck* and *Murden*) but these vessels require a 10 feet draft when fully loaded and that depth exceeds most of the authorized navigation depths. Thus, if the only sidecast dredge in the fleet (the *Merritt*) is decommissioned, then there will not be a government dredge that can operate at full capacity within the State's shallow draft inlets. **(2)** Federal funding for shallow draft inlet maintenance has all but evaporated, and most of the federal funding that has been provided have been by means of supplemental disaster appropriation bills. For the most part, dredging of the subject inlets have been performed solely through State and local funding. Considering the funding situation and possible decommission of the *Merritt*; NCDWR and local governments determined it would be prudent to develop both the scope of work and cost to obtain permits to maintain the navigability of the state's shallow draft inlets. The SDI report is the manifestation of this need, and is was prepared by O'Brien & Gere under a contract with NCDWR.

The SPO participated in the data collection and performed reviews of draft materials for the SDI report and permit applications. The final, comprehensive draft report/permit application was completed and placed on a FTP site for review in December 2014, and it was later resolved that a Biological Assessment (BA) would have to be prepared for Section 7 Consultation (endangered species). The BA was submitted by O'Brien & Gere to the U.S. Fish & Wildlife Service (USFWS) in the fall of the 2015 and the USFWS acknowledged it's receipt and worked towards their Biological Opinion to include terms and conditions associated with the Incidental Take Statement - seabeach amaranth, the sea turtles (*sans* the Hawksbill), piping plover, and the Red Knot Rufa are the species of concern. The Biological Opinion was completed in March 2016 and the CAMA Major Permit and Federal terms and conditions were issued in May 2016. In 2015, the National Marine Fisheries Service (NMFS) recommended the USACE Wilmington District rely on the South Atlantic Regional Biological Opinion from 1997 to meet consultation requirements for the project for sea turtles in a regulatory sense – hence, no additional consultation with NMFS is needed (i.e., no marine Biological Opinion. The permit process will enable Emerald Isle (sponsor) to maintain the Bogue Inlet "ocean bar" and "connector channel" using the same Corps of Engineers' authorized conditions and methodologies in place now, or allow a permit modification to be submitted using this new permit to modify the types of plant (dredge) used, disposal areas, and/or dredging dimensions of the channel.

The cost of the SDI Report/permit application was \$85,000, which was split between the five local government units associated with each of the five inlets, and matched by NCDWR. This equated to a cost of \$8,500 for Bogue Inlet, which was furnished by the SPO/reserve fund in 2014 because the disposal material can be placed on the beach (likely along the “Point” area in Emerald Isle).

2019 Objectives – The SPO will work with Emerald Isle, NCDWR, NC Division of Coastal Management and other regulatory or cost-share partners if dredging work is required along the Bogue Inlet Channel reach using this new permitting vehicle.

(IV) OTHER

(1) Internet/E-mail

Summary (2018 & prior) - In the latter stages of 2014, the SPO migrated the www.protectthebeach.com website to the *CivicPlus* platform utilized by the County, thereby fully integrating the SPO website into the relatively new County “carteretcountync.gov” domain. By doing so, the site was fully converted from a “remote computer file transfer” system that utilized the County’s server to one that is completely web-based. This effort included the reformatting of over 25 individual webpages, the creation of numerous photo galleries, and the establishment of the site hierarchy within the new domain – www.protectthebeach.com is now re-directed to <http://www.carteretcountync.gov/295/Shore-Protection>.

The SPO also created and maintains the “Beach News” public clipping service, providing up-to-date news from across the State and abroad concerning issues related to coastal processes, beach preservation, waterway navigation, public access, flood insurance, sea-level rise, endangered species, and more (<http://www.carteretcountync.gov/301/Beach-News>). Akin to the 2014 website migration effort, “Beach News” was modified and is now disseminated using a “newsflash module” that is available through the *CivicPlus* platform. Previously, Beach News was distributed via email and the newsflash module offers much greater control over subscriptions and other editing features. There were approximately 885 subscribers in 2018, which represents a continued increase from 816 subscribers in 2017, 754 subscribers in 2016, 695 in 2015, and 740 in 2014. Note: The *CivicPlus* newsflash module feature automatically maintains email addresses and removes subscribers if the system receives consistent “bounce backs”. Considering Beach News was in existence for twelve years before the *CivicPlus* transition, the amount of “dead” email addresses in the register during the first year of the transition to *CivicPlus* was likely very high – the reduction in subscribers noted above from 2014 to 2015 is likely a reflection of the automated removal system.

2019 Objectives – Continue the “Beach News” clipping service as it enters its 15th year of existence. Continue to update the “ProtecttheBeach.com website with items such as new beach monitoring reports, electronic editions of Beach Commission agendas and minutes, create new project websites, etc.

(2) Meetings/Conferences

Summary (2018) – Attended six State meeting/conferences regarding water resources while providing a total of nine presentations in the 2018 calendar year to local civic organizations, groups, State agency sponsored forums, and State advocacy groups. Also coordinated [day long affair](#) with Jan Peelman,

Attaché for Infrastructure & Water Management, Embassy of the Kingdom of the Netherlands on June 11, 2018 to exchange ideas regarding water resources and infrastructure. In 2017, the SPO also served as a panelist at a News & Observer [Sea-Level Rise Forum](#) held on September 27, 2017 at the N.C. Museum of History in Raleigh attended by over 200 persons.

2019 Objectives – Provide presentations to local civic organizations and groups as needed.

(3) Boards/Appointments (2018 – previous)

Continue to serve on; **(1)** The Coastal Resources Commission's Science Panel, **(2)** the N.C. Coastal Resources Advisory Council (appointed chairman in 2016), and **(3)** the Board of Advisors for the N.C. Coastal Resources Law, Planning, and Policy Center.

Formerly served on the N.C. Water Resources Congress executive committee prior to its dissipation in 2015. Voluntarily concluded serving on the Board of Directors for the American Shore & Beach Preservation Association and the Outreach Advisory Board for N.C. SeaGrant in 2010. Also concluded service on the State's Beach, Inlet Management Plan (BIMP) Advisory Committee, the State's Ocean Policy Report Advisory Committee, and the U.S. Environmental Protection Agency's Coastal Elevations & Sea Level Advisory Committee in 2009 (all temporary appointments).